THE BRICKBUILDER.

VOL. 13 MARCH 1904 NO. 3

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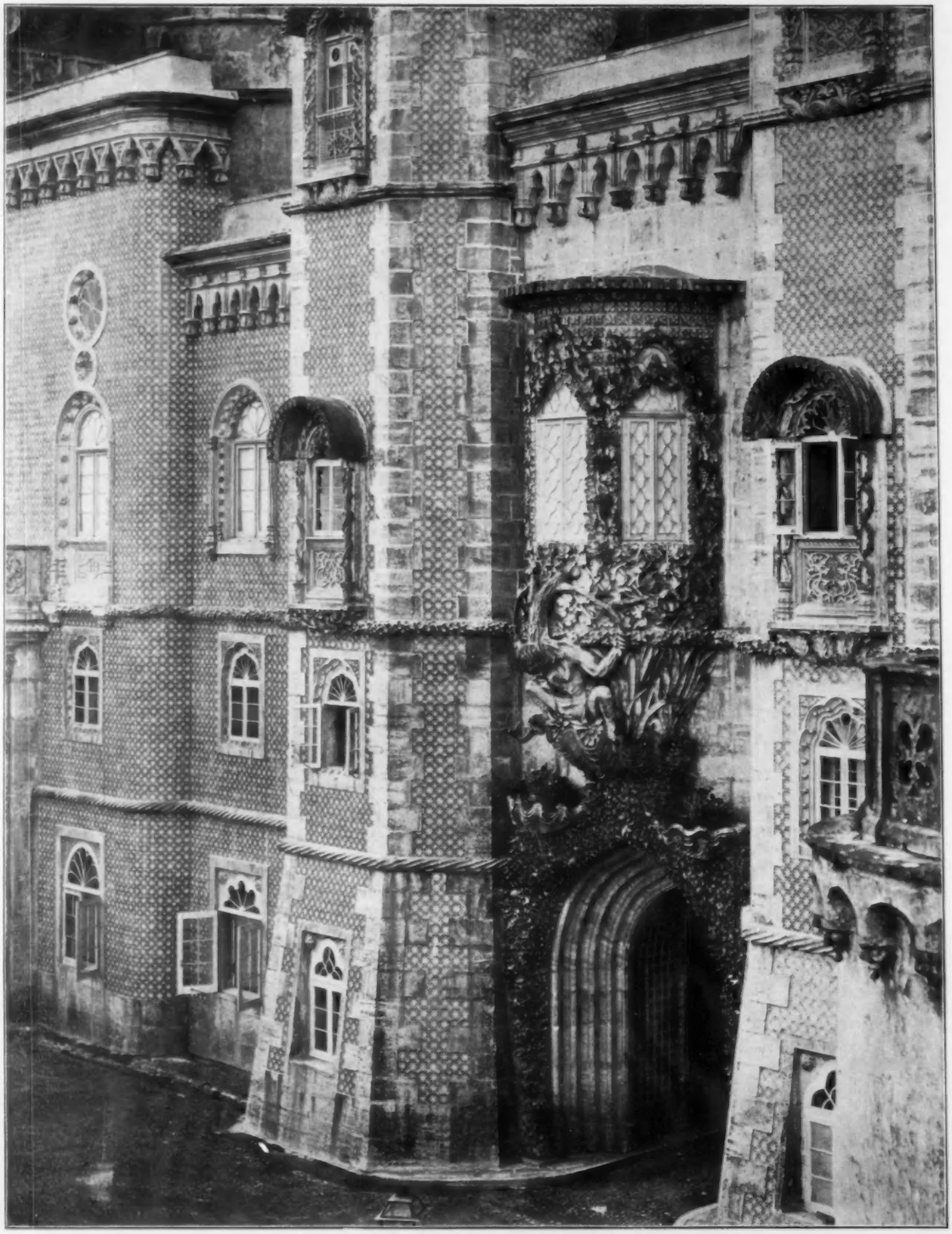

AN EXAMPLE OF FAIENCE AND TILE WORK.

COURT OF THE CASTLE AT CINTRA, PORTUGAL.

THE BRICKBVILDER

VOL. 13 No. 3 | DEVOTED · TO · THE · INTERESTS · OF ARCHITECTVRE · IN · MATERIALS · OF · CLAY | MARCH 1904

THE BRICKBUILDER.

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" Terra-Cotta	II and III	Fire-proofing	IV
Brick	III	Machinery	IV
" Enameled	III and IV	Roofing Tile	IV

Advertisements will be printed on cover pages only.

THE BALTIMORE FIRE.

IN view of the importance which attaches to the test of architectural construction and building materials generally at the Baltimore fire, we have decided to publish a special number of THE BRICKBUILDER devoted entirely to the subject. This number is now in process, and will be mailed to all of our regular subscribers within a week.

FUTURE DISASTERS.

THE past decade has witnessed an extraordinary amount of tall office building. The number of such structures in Boston has more than doubled in that period. In New York it has increased nearly five fold, and in other cities the increase in the number of supposedly first-class tall structures has been enormous. It has seemed at times as if we could not build fast enough nor often enough to meet the demand. A spirit of contagion was constantly urging us to larger, higher and more speedily erected buildings, so that the efforts of architects and of the old-fashioned building contractor who has had his hand on every portion of the work, were not sufficient to meet the demand, and construction companies with large paper assets, realty companies able to float anything, from a duck to a man-of-war, and syndicates of building jobbers ready to cover the earth with tall steel frames sprang into existence with a mushroom growth which is not easy to entirely explain. We are just beginning, in our opinion, to pay the price of this sudden expansion. The collapse of the Hotel Darlington in New York, the bad fire in Rochester, when the whole front of a building collapsed into the street, and other occurrences which are whispered among the contractors and builders but have not yet appeared in print, are to our minds a measure of the terrible price we may have to pay for the extraordinary development of steel frame construction during the decade just passed. These disasters and many of our fires in so-called fireproof buildings are but the precursors of a tremendous series of failures in steel buildings, and these failures will be chargeable directly to our extraordinary hustle and desire to build quickly. It is safe to say that a large proportion of the steel frame buildings which have been put up in our large cities during the past five years have not only been markedly inferior to the average of the five years just before, but have been constructed in so slipshod and dangerous a method that it is only good luck or chance that has prevented some of them from falling down before they were completed. We are not alarmists, nor do we take a pessimistic view of the future. When the steel frame first made its advent among us it was a problem handled by specialists who understood their business. It is still a problem for the specialist; but the realty companies, with their architects and engineers hired by the year, the shyster builders who mortgage and sell out quickly have no use for an expert, and the result is such absolutely preventable accidents as happened in New York. There are plenty of well constructed, durable, first-class steel frame buildings in all our cities. Unfortunately, in the public mind they are classed with the shoddy constructions that are beginning to be the majority. We can only hope that as disasters inevitably overtake the wretchedly thrown together buildings, they may come in such manner as to prevent at least the continual foisting of such structures onto the community under the name of first-class buildings. There are two popular delusions to-day; one seems to be that every large building which catches fire is a fireproof structure, the second is that every building which has a steel frame must necessarily be well constructed. For both of these delusions the popular press is largely to blame.

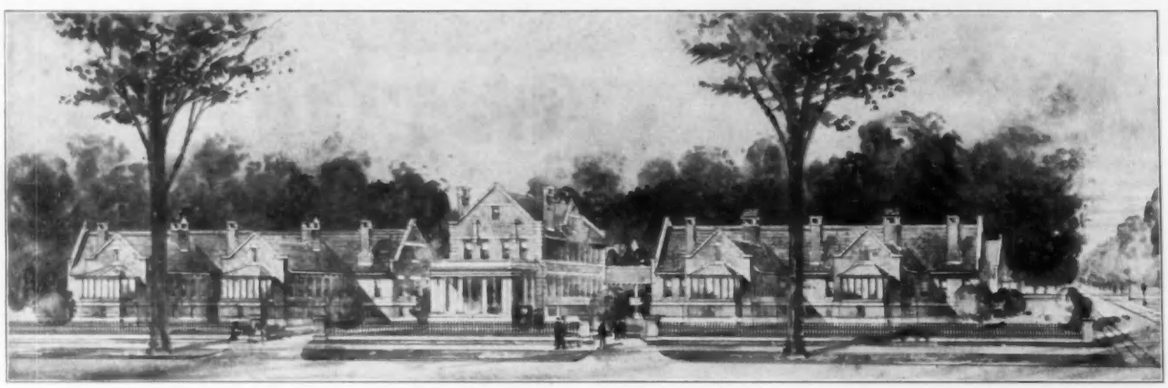
Hospital Planning. III.

SUBURBAN HOSPITALS.

(Continued.)

BY BERTRAND E. TAYLOR.

IN the decade of 1890 to 1900 the increase in hospital incorporation and construction was more marked than before, and the past three or four years show a still greater increase.



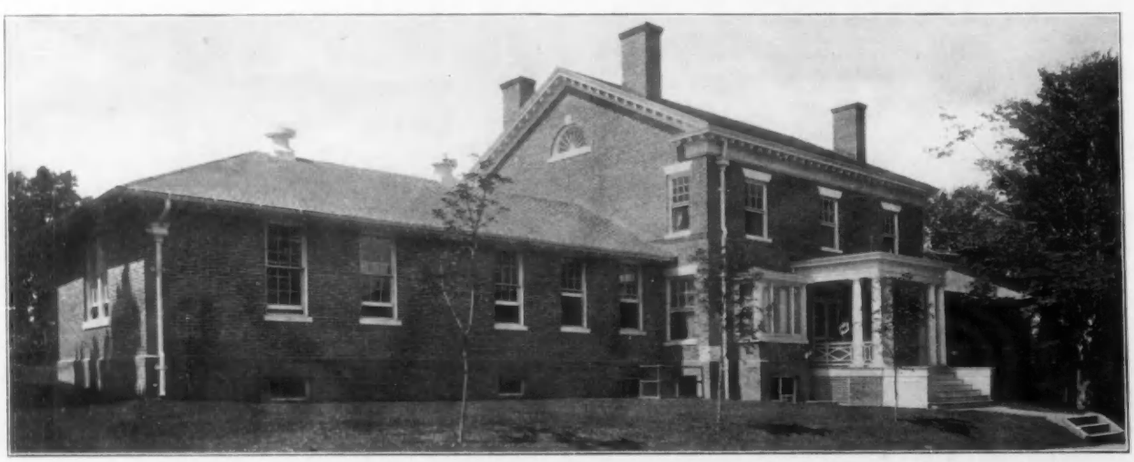
HOSPITAL AT BRADFORD, PA.
Green & Wicks, Architects.

At the present writing there are, according to a careful computation made by Mr. Sutton of the National Hospital Record in response to my query, at least twenty-five hundred hospitals in this country, not counting those private hospitals and infirmaries connected with various institutions, schools, almshouses, etc., or asylums, sanatoria and retreats.

In this great aggregate there are many large metropolitan hospitals, perfectly organized in all their highly specialized departments, but in comparison with the great total the number of hospitals of one hundred beds or more is very small.

A careful computation shows that there is now a hospital bed to every one hundred and fifty persons in Massachusetts, a showing that looks incredible in view of the fact that it is but a few years since hospital experts recommended as ample a provision of one bed to every thousand inhabitants.

In spite of this seemingly ample provision, more hospitals are being built and enlarged now than at any previous period, and it really seems that the ratio would very soon be not one to one thousand, but one to one hundred.



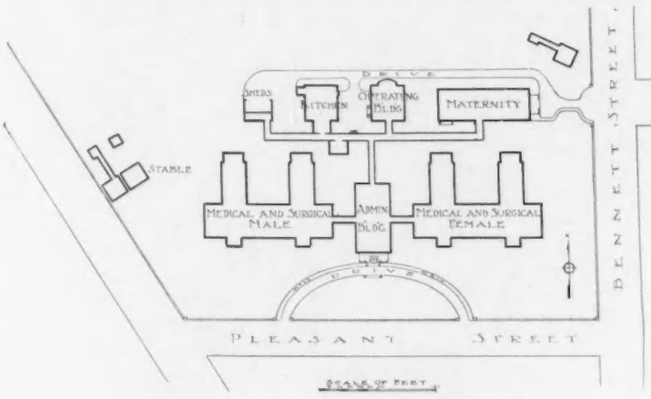
HOSPITAL AT MATTEAWAN, N. Y.
Renwick, Aspinwall & Owen, Architicts.

Only one state exceeds Massachusetts in its hospital accommodation, and that is California, with one bed to every one hundred and twenty-five inhabitants; and according to Mr. Sutton the entire United States averages one bed to every three hundred and fifty inhabitants.

After learning that there were probably twenty-five hundred hospitals in the United States, and knowing that

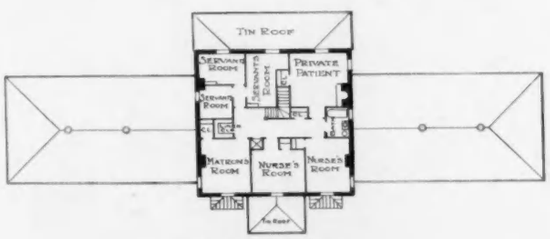
NOTE. — In the previous issue the authorship of the design for the Newton Hospital was incorrectly ascribed to William P. Wentworth and Kendall, Taylor & Stevens, "associate architects." Mr. Wentworth designed the four or five wooden buildings constituting the hospital plant up to 1890. Messrs. Hartwell and Richardson designed the nurses' home in 1892. The problem of future development was placed in the hands of Kendall, Taylor & Stevens, architects, in 1895, and they have had charge of the development since that date.

most of them were of the class under consideration in this article, the writer felt, naturally, that there was a mine of valuable information, and that only a little work was needed to gather a vast amount of interesting material. Reports were procured of all the hospitals in the country of this class as far as possible, but it was found,

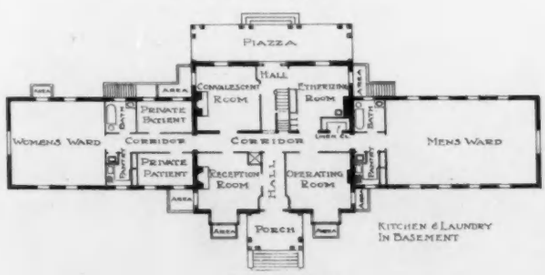


PLAN, HOSPITAL AT BRADFORD, PA.

alas, that about ninety per cent were housed in adapted (or rather ill adapted) residences, that the officials frankly stated had nothing worth studying or copying, and the remainder, some of which were in new and expensive buildings, were generally designed by an architect of brilliant attainments, yet he was generally totally unfa-



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

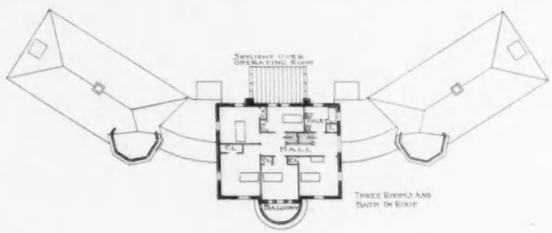
HOSPITAL AT MATTEAWAN, N. Y.

miliar with even the rudiments of hospital requirements. The result is, certainly, extremely disappointing, but a new era seems to be dawning. Some of the leading architects of the country are now doing work that will in time evolve a standard that will be far in advance of anything heretofore attained, here or abroad.

The most difficult problem confronting the designer of a small hospital is that of specialization and classification.

It is manifestly impossible to idealize in this direction to the extent usual in a large hospital of several hundred beds, yet it is evident that great progress has already been made.

Possibly it may seem a waste of effort to attempt to argue the question of a single building (called a Block hospital), or an aggregation of three or more buildings (called a Pavilion hospital). The evidence is overwhelmingly in favor of the pavilion principle, and all experts are united in their judgment that the best results can



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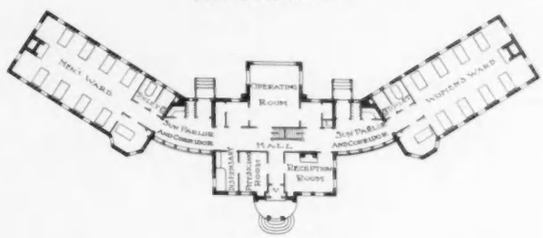

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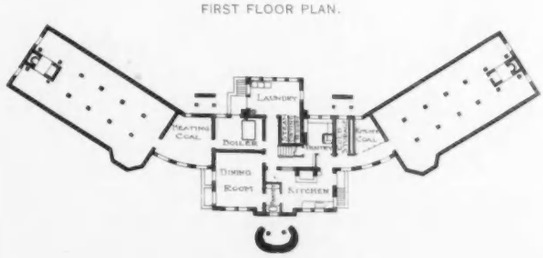


BASEMENT PLAN.

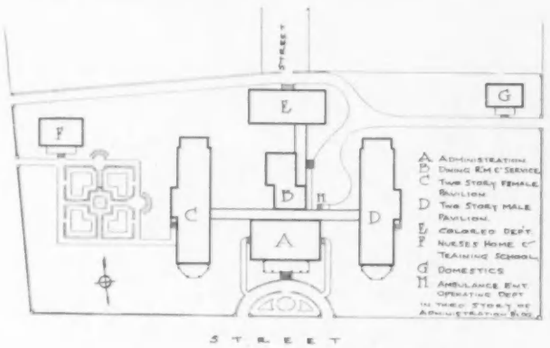
PERTH AMBOY CITY HOSPITAL, PERTH AMBOY, N. J.

only be attained by the complete isolation of different classes of disease.

The reasons are obvious. In this as in all analogous problems the greatest success is possible only in getting back to nature. Civilization seems to demand a gathering together of large numbers of individuals within the smallest possible space, and the evils and diseases of civilization result. Expensive methods of construction and cost of service seem to demand the congregating of a large number of sick people in one room, the open or congregated ward, and sometimes a number of these wards, large and small, under one roof. These customs may seem necessary, but are contrary to nature, and if good results it is in spite of adverse conditions.

It seems to the writer that if one goes to the bottom of the subject he will come to feel that it is best to provide in every possible way for individualizing the treatment. In spite of all the well understood and

absolutely vital reasons for separating the various diseases and the sexes, and providing entirely isolated buildings for each class and department, each thoroughly equipped for its special work, we continually meet people who are prone to argue in favor of a single building, on the score of less cost to build and maintain.



PLAN, NORFOLK PROTESTANT HOSPITAL.

Now let us consider the question of cost of construction. At first glance it would seem to be much cheaper to build one large structure than several small ones, but a careful study of the problem will convince one that this is not always true.

In the first place a large building seems to require a large expense for ornamental features in the way of breaks in the exterior walls, gables, cupolas, belt courses, etc. Unless it is treated in a comparatively ornate manner it is quite apt to look like a factory.

Again, if a large and high building, the construction must necessarily be of a heavier and more expensive character.

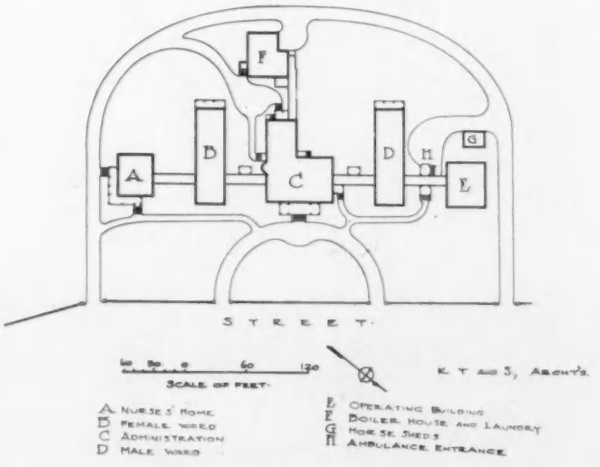
In a group of several small buildings there seems to be little or no need of strictly ornamental features. The natural grouping and lights and shades of the various pavilions connected by the corridors, varied by the necessary solaria and airing balconies, give all the picturesque elements that can be desired, and the general effect should be attractive, looking the hospital, yet unassuming, homelike, and not enough institutional to be repellent.

Again, few if any hospitals are built and finished complete to the ultimate capacity at once. In a small town of a stationary character as regards increase in population, or in case of a hospital for a special purpose or one built and endowed by an individual, it is possible and necessary to limit the growth and usefulness of the institution by arranging for a completed whole to be immediately realized. In the general hospital of popular character the ultimate possible growth must be carefully calculated and the entire proposition in all its varied elements and possibilities carefully planned; then if funds for but one or two buildings are available, these can be temporarily adjusted to the requirements of complete hospital use, and the remaining buildings added as the funds are supplied and the needs are made evident. It is thus clear that the pavilion principle of planning is the only possible solution of the problem in at least nine-tenths of the cases one meets in general practice, and in several of the plans used to illustrate this article but a portion of the scheme is at present developed and the additional buildings will be built as needed.

A study of the various illustrations will show that it is quite possible, and in fact quite customary at the present day, to build a hospital of fifty to one hundred beds in six or eight buildings. There should be an administration building, with a detached or semi-detached service building; in the rear of this group should be the boiler house and laundry, with the autopsy, mortuary and garbage crematory. There should be a pavilion with open ward and private rooms and all conveniences on each side, one for male and one for female patients. There should be a complete operating building, and, if possible, male and female special pavilions with open wards and private rooms and all the general conveniences, so as to isolate these surgical cases, as in the Newton Hospital. (See Article II, The Brickbuilder for February.) If this is not possible, certain rooms must be reserved in the male and female pavilions for surgical cases that would be unsafe in a general ward.

There should be a nurses' home with training school accessories, and, if possible, a pavilion for private cases. As the hospital grows and develops there will be needed also a maternity pavilion with free beds, open wards, private rooms, a small operating department for a delivery room, a baby room and all accessories.

When a hospital gets to this stage of development, a special children's pavilion will be found to be an absolute necessity, and in fact the disposition of the children otherwise than in a special pavilion, where they will not be an annoyance to very sick patients, will tax the ingenuity of all concerned. The usual custom is to place a small children's ward in the female pavilion, but a better place until the children's pavilion is built is in the rear of



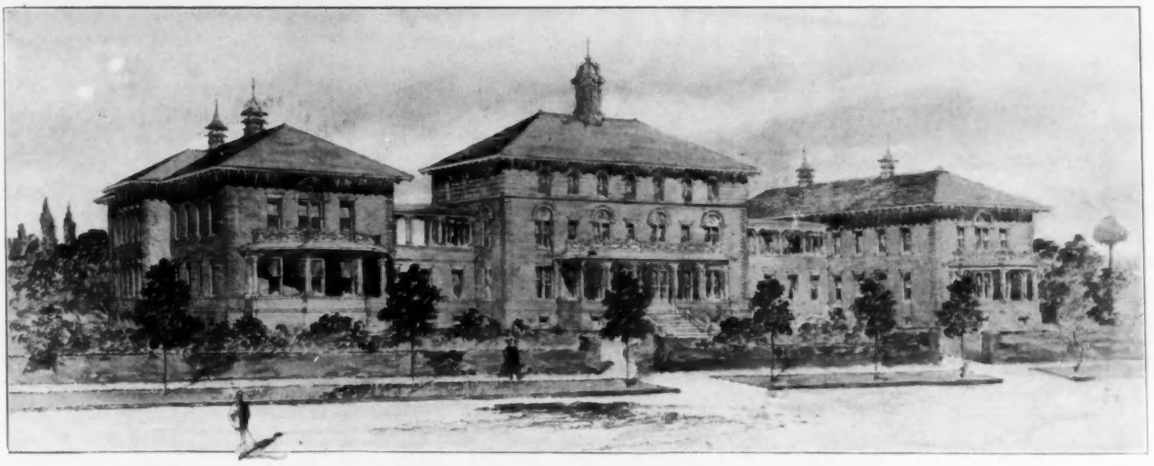
PLAN, ANNA JAQUES HOSPITAL, NEWBURYPORT, MASS.
Kendall, Taylor & Stevens, Architects.

the service wing of the administration building on the second floor, away from other patients.

Horse sheds will need to be provided, also an ambulance stable, unless the local livery, as is quite customary, runs the ambulance.

It is quite evident that, to properly do its work with

the greatest success and comfort, a one hundred bed hospital should have all these buildings and at least a small isolating department of one or more buildings for cases developing in the institution, or a complete fever, or as we term it, an isolation hospital of three buildings and a



NORFOLK PROTESTANT HOSPITAL, NORFOLK, VA. (1901).
Kendall, Taylor & Stevens, Architects.

smallpox hospital of at least one building, if these are not maintained by the municipal authorities elsewhere.

The little village hospital of ten to twenty beds has to grapple with the same problems as the large hospital of one hundred or more beds, yet it is absolutely impossible to subdivide and classify to any great extent. The little Watts Hospital (see Article II, THE BRICKBUILDER for February) shows a possibility, but there are many hospital organizations that cannot afford to spend even $20,000 for buildings, and therefore it seems absolutely necessary to condense these ten or twelve buildings into one, thereby getting an economical, comfortable arrangement, cheaply built and handled, with small expense for nurses and service. The plans of the Exeter Hospital and of the Windsor, Nova Scotia, Hospital illustrate this effort to reduce the problem to the lowest terms, and although they are very comfortable little hospitals, yet a few hundred dollars invested in corridors and the isolation of departments would make them much safer and certainly more comfortable for the patients. It will be noted that in all these small hospitals the operating department is a complete specialized department separated from the remainder of the hospital in a pavilion or a wing, where this vitally important work can be done free from intrusion and with all the accessories and conveniences at hand. This most essential and interesting special hospital department will be treated at length later.

In designing a hospital scheme the future should be discounted for at least twenty-five years, if possible. In some cases this is very easy, for the community may be a stationary one with no great possibility of growth. In such cases it is quite obvious what to do, and the realization of a complete perfect scheme would simply depend on the architect and the money.

THE ANNA JAQUES HOSPITAL, NEWBURYPORT, MASS.
Kendall, Taylor & Stevens, Architects.

In many places, however, there is an evident need of possibly a twenty-five bed hospital to start with, and a just as evident probability of a need for a one hundred

bed hospital within fifteen or twenty years. In such cases the only safe economical proposition is to lay out as complete and highly specialized a scheme as is possible, and to build and develop along the lines of this scheme as the funds come to hand and the needs manifest themselves. Much trouble has ensued and much money has been wasted by not following this, the only rational or businesslike course.

The various plans and perspectives used to illustrate this article have been designed and built, in whole or in part, during the past three or four years; and although no one plan can be considered as attaining in all respects the ideal, yet most of them show a decided advance in many respects, especially in the direction of classification and specialization.

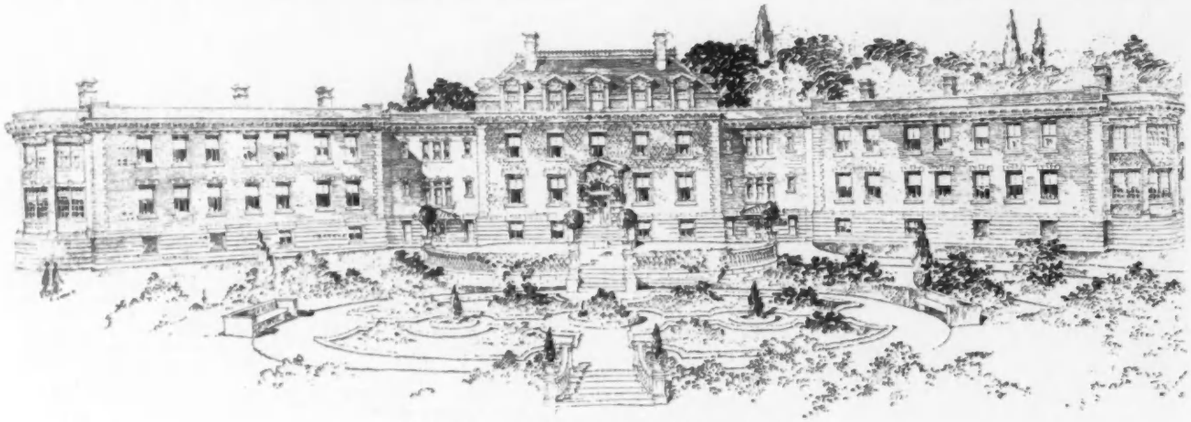
It is possible that the foregoing reasoning is fallacious, that we are wrong in our deductions, and that, on the whole, a block plan hospital can be so arranged as to be, in many regards, decidedly preferable. There is another side that can be argued, and this has been done in a very thorough and effective manner by Mr. Henman, at a recent meeting of the Royal Institute of British Architects.

Mr. Henman is the architect of the General Hospital at Birmingham and, therefore, well and favorably known as a hospital architect.

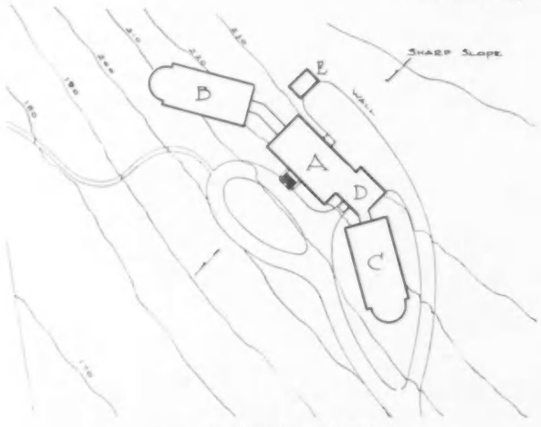
His most interesting essay was fully illustrated by plans and photographs of one of the most novel hospitals of the day, designed by him and completed and opened to the public last summer.

An extended description of this interesting and almost, as I may say, revolutionary experiment would be entirely out of place in the present series, as it has to do with a metropolitan hospital of three hundred beds. I desire, however, to take note of some of the points advanced by Mr. Henman and to raise the question as to their application in smaller hospitals.

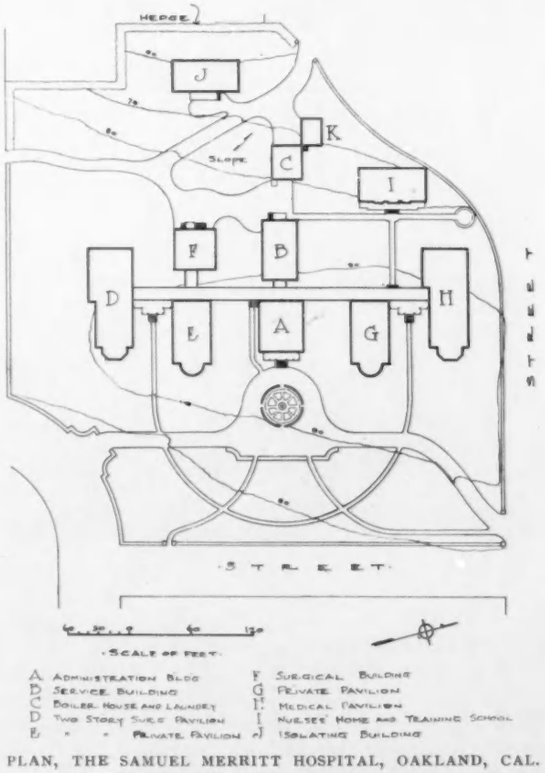
This is the age of machinery and of power, and



FAULKNER HOSPITAL, WEST ROXBURY, MASS.
Kendall, Taylor & Stevens, Architects.



PLAN, FAULKNER HOSPITAL.



PLAN, THE SAMUEL MERRITT HOSPITAL, OAKLAND, CAL.
Kendall, Taylor & Stevens, Architects.

Mr. Henman characterizes a hospital as a "health factory," and he has developed and built this hospital along the lines of a one-story mill or factory. The general hospital portion is about 116 feet wide and 245 feet long and one story high. The administration, nurses' building and other wings are two to four stories high, and the boiler house, laundry, pathological department, porter's lodge and two small isolation pavilions are isolated

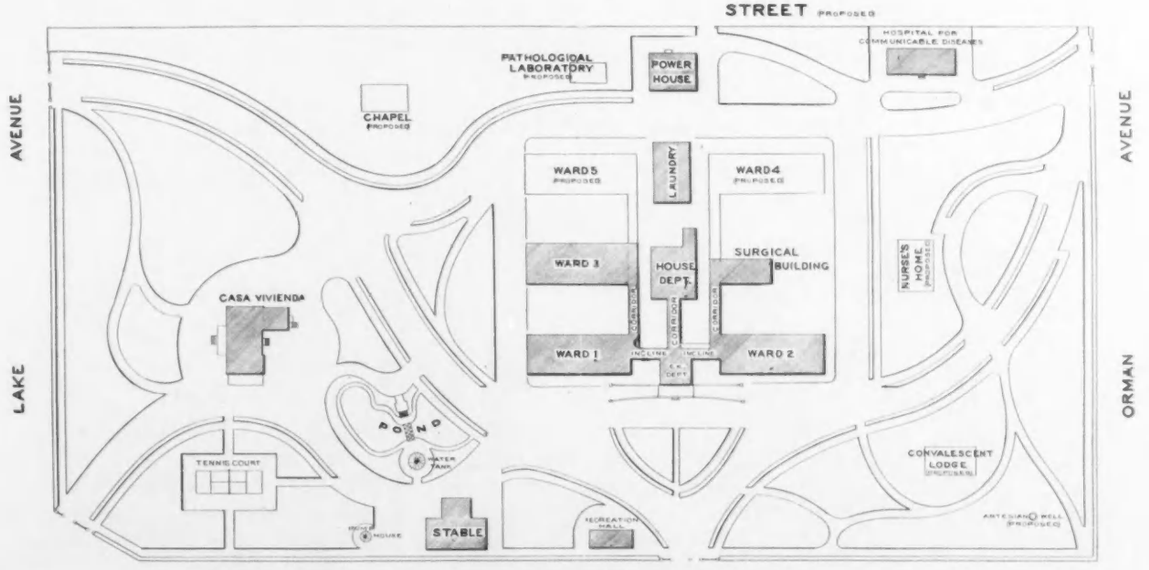
MINNEQUA HOSPITAL, PUEBLO, COL.

structures. The wards are about 25 by 60 feet, accommodating fourteen beds. These open wards are side by side, with partition walls between, and a window ten feet wide opening south on a balcony between the two toilet towers, in the usual English manner. This window gives the only view of mother earth and the only chance for direct airing, but the rooms are evidently perfectly lighted by plate glass skylights running the entire length on each side of a vaulted ceiling.

doors, except where it is best to cut off view or maintain a different temperature, are deprecated on the ground that they interfere with the proper circulation of air and thorough ventilation.

The entire scheme is based upon what the architect terms "plenum ventilation," claimed to have been designed by an engineer in Edinboro, some twelve years ago, and it is quite evident that if it is desirable to maintain an absolutely perfect engineering plant, winter and summer, feeding each patient just so many cubic feet of air per hour of this or that combination and degree of heat or cold, this "health factory" is most perfectly designed.

The space occupied by the hospital is practically the same as though these wards were placed in three-story pavilions with the alternating areas fifty feet wide, open to the south in the conventional manner.



PLAN, MINNEQUA HOSPITAL.

The various accessory rooms and conveniences, which are less than would be considered essential in America, are grouped together back of the open wards, all of them — isolating rooms, doctors' rooms, operating rooms, clinical or lecture rooms, baths, etc. — being inside rooms with top light only.

Outside windows, cut-off or isolating corridors and

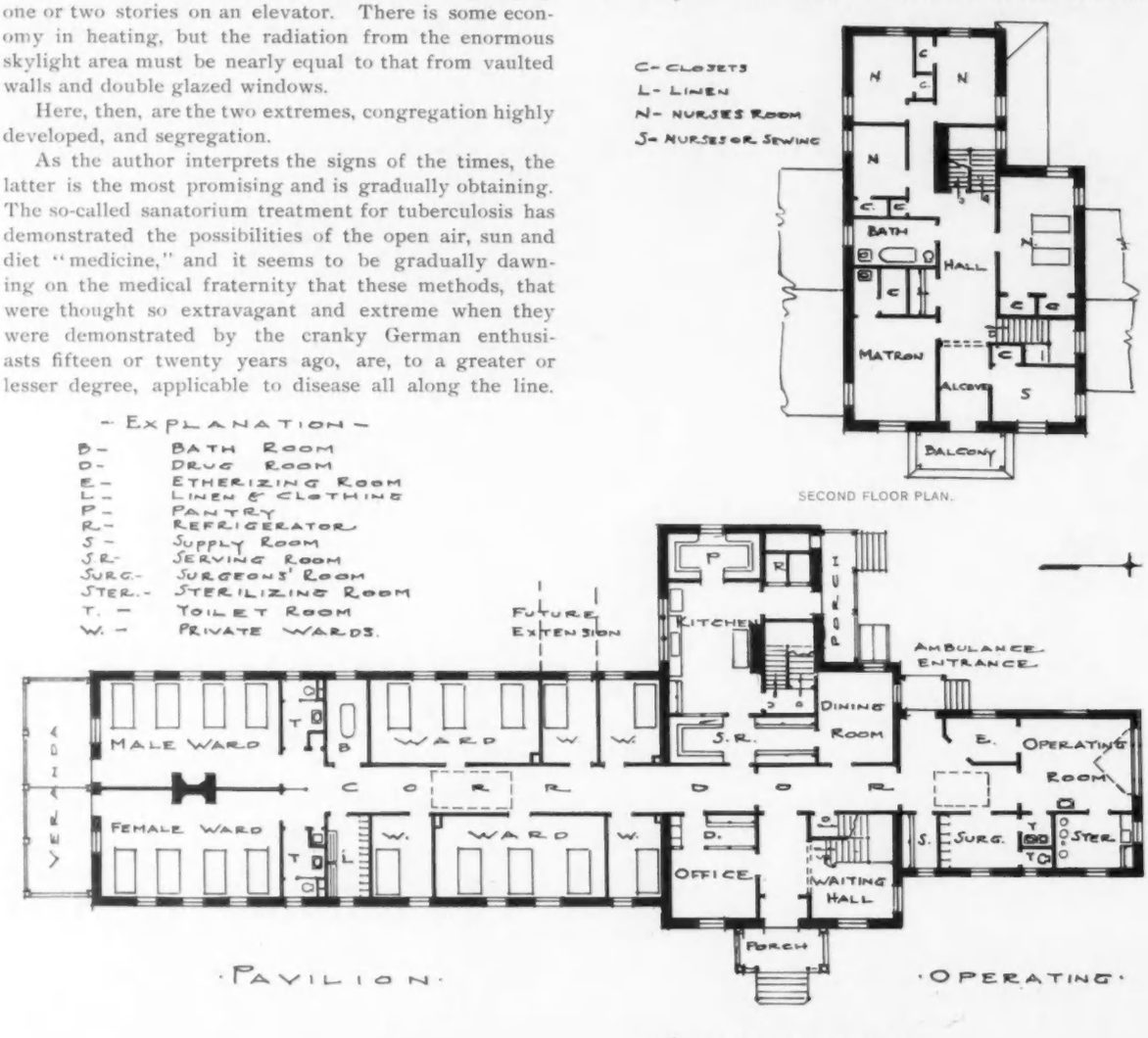
The argument is that such a hospital is cheaper to build and more economically administered.

There is about three times the amount of basement area, although not quite three times the cost. There is three times the roofing area, and this of great expense for steel in the vaulting and for skylights, but a considerable saving is made in exterior walls.

As the hospital covers the same ground, the distance a physician or officer has to travel from the entrance to any given bed is practically the same as in the general pavilion hospital, but he is saved the time of going up one or two stories on an elevator. There is some economy in heating, but the radiation from the enormous skylight area must be nearly equal to that from vaulted walls and double glazed windows.

Here, then, are the two extremes, congregation highly developed, and segregation.

As the author interprets the signs of the times, the latter is the most promising and is gradually obtaining. The so-called sanatorium treatment for tuberculosis has demonstrated the possibilities of the open air, sun and diet "medicine," and it seems to be gradually dawning on the medical fraternity that these methods, that were thought so extravagant and extreme when they were demonstrated by the cranky German enthusiasts fifteen or twenty years ago, are, to a greater or lesser degree, applicable to disease all along the line.



FIRST FLOOR PLAN, HOSPITAL AT EXETER, N. H. Kendall, Taylor & Stevens, Architects.

A hospital has a broader and more complicated work to perform than has a sanatorium, yet a hospital must be also essentially a sanatorium, a place where normal, natural conditions of health can be attained by most careful and scientific eradication of all causes leading to a defection from the normal, as well as the supplying of all natural conditions the absence of which allowed the abnormal conditions to obtain. Health is an inherent condition of nature and cannot be manufactured by man, therefore the name and the idea of "health factory" are repellent.

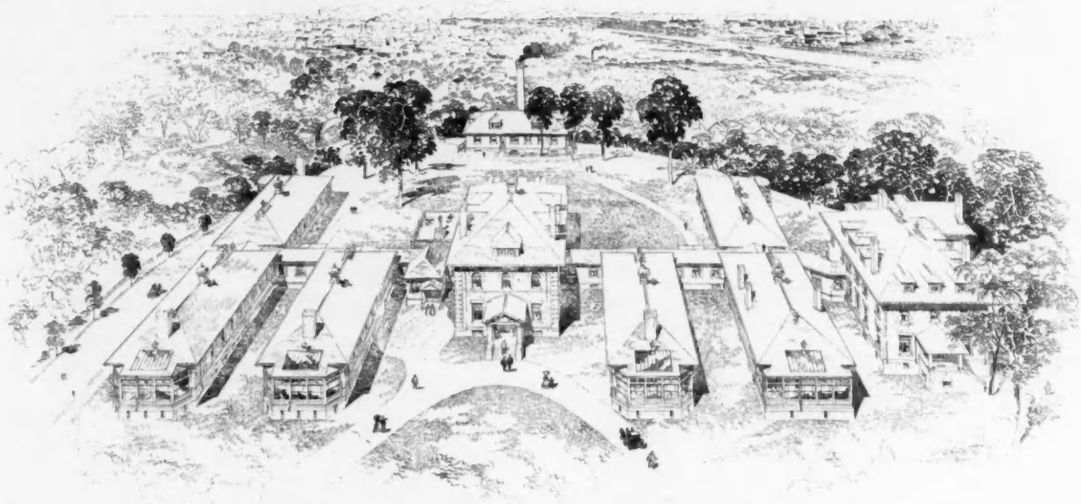
The time to retain the services of an architect is before the lot is selected. If he has had the proper training and experience to fit him to properly design and construct the various buildings for the institution, that same education and experience will enable him to render invaluable expert service in the selection of the lot. In the experience of the author many mistakes have been made by the best intentioned trustees in this most important matter. In many cases it was quite easy to demonstrate the folly of building on the lot selected, and a new lot with the greatest number of desirable points was finally found and purchased, but in some cases this is impossible, and it is much wiser and more economical to start right.

A study of existing hospitals in this country and Europe seems to demonstrate the fact that in nine cases out of ten the lot of land originally purchased is too small; this is especially true of British and European hospitals, where in numberless instances the buildings cover a very large per cent of the land.

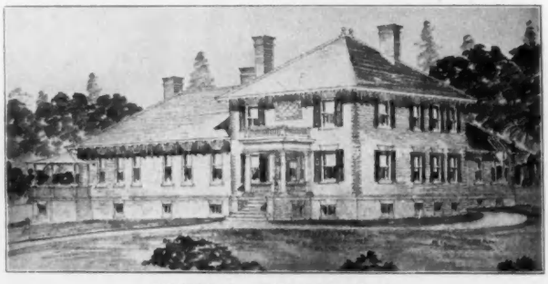
This may be necessary to a degree in the largest cities, but even then it is possible, by taking a broad view and discounting the future, to so locate the institution that there will be room for growth.

In a small hospital there is no possible excuse for not securing a large lot of land, the more the better, for the distances are so short that land can be purchased just outside the general building limits that, as the place grows, will gradually become more accessible relatively, and thus more valuable. For a hospital of fifty to one hundred beds there should be from five to ten acres of land. The smaller the community the cheaper the land, therefore the nearer possible to obtain a maximum of nature per bed.

The ideal location is a hill lot, making it possible to build above the general lay of the town, giving greater isolation, better views and air and better drainage. In most towns and small cities there is just such a lot. The grades should not be too steep and the general slopes to the south, but it is very nice to have a good drop to the rear, so as to get the boiler house well out of ground and the boiler below the returns.



HOSPITAL AT YOUNGSTOWN, OHIO. Dwight & Chandler, Architects.



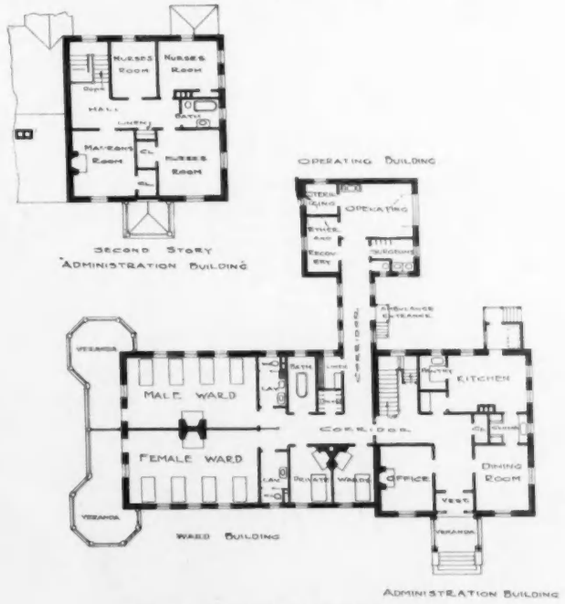
HOSPITAL, WINDSOR, N. S.
Kendall, Taylor & Stevens, Architects.

Grounds and Accessories.

One feature of hospital planning that has thus far received too little attention is that of grounds and accessories. There are very few hospitals that have made use of evident possibilities in landscape architecture.

If the grounds are restricted or the outlook undesirable in any direction (although these two faults should not exist), everything possible should be done by the introduction of judicious planting and little formal gardens with walks and seats for convalescents. As long as it is impossible to introduce decorative details and accessories in the patients' rooms, every possible use should be made of the opportunity to make the immediate surroundings as beautiful as possible.

There should be an inclined plane from every solarium or airing portico to enable convalescents to walk or be wheeled down to the garden paths or out over the lawns.



PLANS, HOSPITAL, WINDSOR, N. S.

It makes little difference how the proposed hospital lot lies with reference to the street or streets, the general axis of the group of buildings should be east and west, and the entrance and service drives can be handled in a formal or informal manner as the contour of the site may permit.

Brick Architecture in and about Chicago. III.

BY ROBERT C. SPENCER, JR.

WHILE this series of articles has thus far dealt chiefly with comparatively recent work, favoring the examples least hackneyed through publication, it would be incomplete without the remarkable group of three houses on the Lake Shore Drive, designed by Francis M. Whitehouse. These are the McClurg, Armour and Selfridge houses. Although built in 1890–92, shortly before the withdrawal of Mr. Whitehouse from his practice, these houses are among the best in Chicago and will be among the best many years hence, because of the originality and simple dignity of their composition; this without disparaging the detail, which is refined, delicate and well placed. The most northerly of these houses was built for the late Gen. A. C. McClurg, and is of a light pinkish red Roman brick and buff Bedford stone.

The Armour house is built of a rich ruddy tan speckled Roman brick, — the first fireclay brick used in Chicago. These bricks were made especially for Mr. Whitehouse by the Illinois Fireproofing Company. Similar bricks were used later by the same architect in the Loomis and McBirney houses. With its red sandstone basement and trimmings and roof of red shingle tile, its sharp, clean gable and its symmetrically disposed bays covered with "Boston ivy," it forms an effective center for the group.

The Selfridge house to the left, of dull cream-colored Roman brick above with buff limestone base, is equally interesting and successful in composition along very different lines. The denticulated borders and bands in molded brick are effective.

The reticence of the entrances to these houses, particularly in view of the period in which they were built, is as noteworthy as it is commendable.

Over on Astor Street, looking upon a charming walled garden, is the Bowen house, another of Mr. Whitehouse's designs which makes a picture when glimpsed through summer foliage from the garden side. The garden wall, with its undulating profile, is an interesting if rather too unquiet a foil to the formality of the house.

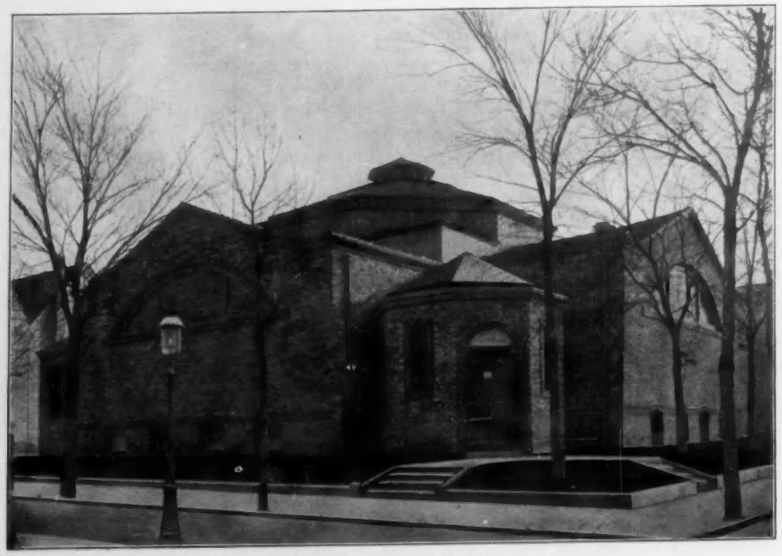
The houses 576 and 610 North State Street and Mrs. Emmons Blaine's house at Rush and Ontario streets illustrate the quality of the brick domestic work done in the Chicago office of Shepley, Rutan & Coolidge. The first mentioned is built of a pinkish tan Roman brick with terra-cotta cornice, red sandstone basement and doorway; the latter showing a rather original scheme of treatment in the feeling of some of the north Italian early Renaissance work, which would have, perhaps, been more pleasing if dropped a foot or two nearer the street level. The cornice is bold and good in scale. No. 610, farther north, is of a light tan Roman brick, combined with buff Bedford stone and buff terra-cotta, with a Renaissance cornice with a wide "swag" frieze and a porch on columns with very pleasing caps.

The Blaine house is somewhat after the older Richardsonian manner, with its rather refined and delicate Roman-

MRS. EMMONS BLAINE'S HOUSE, GARDEN FRONT.
Shepley, Rutan & Coolidge, Architects.

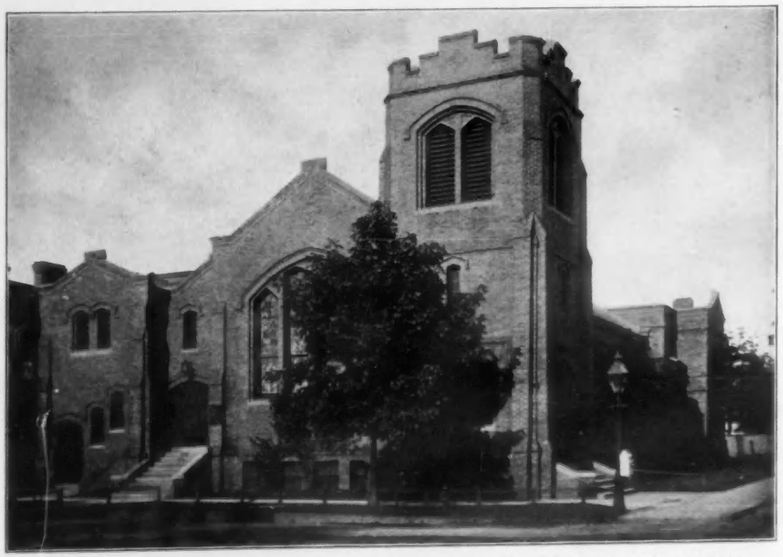
MRS. EMMONS BLAINE'S HOUSE.
Shepley, Rutan & Coolidge, Architects.

HOUSE, WOODLAWN AVENUE.
Patton & Fisher, Architects.



CHURCH AT RAVENSWOOD.
Henry K. Holsman, Architect.

CHURCH, FIFTY-SEVENTH STREET AND LEXINGTON AVENUE.
L. E. Stanhope, Architect.



CHURCH AND PARSONAGE, WOODLAWN AVENUE AND SIXTY-SECOND STREET.
Waid & Cranford, Architects.

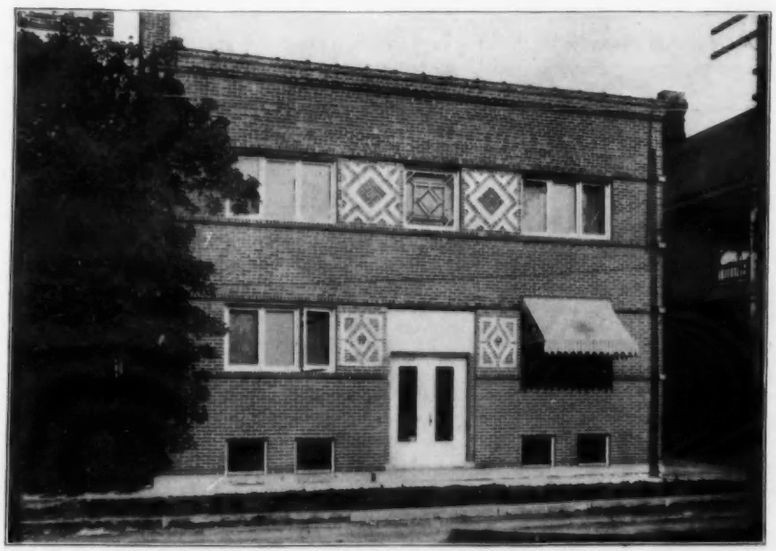
QUADRANGLE CLUB, D. H. BURNHAM, ARCHITECT.
Enlarged and rebuilt by Howard Shaw, Architect.

UNIV. OF MICH.

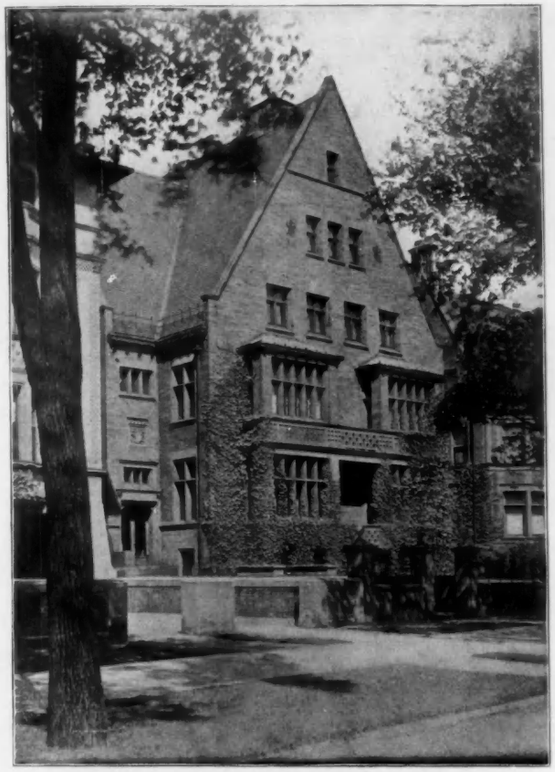
HOUSES, 5719–5721 WASHINGTON AVENUE.
R. C. Spencer, Jr., Architect.

HOUSES, 5719–5723 WASHINGTON AVENUE.
R. C. Spencer, Jr., Architect.

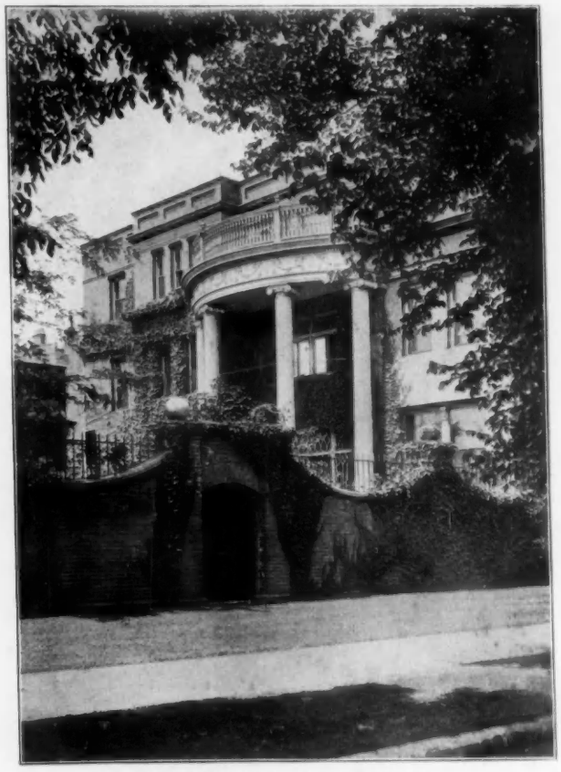
COURT, BOULEVARD TERRACES.
Henry K. Holsman, Architect.



FLAT BUILDING, 6109 NORMAL AVENUE.
R. C. Spencer, Jr., Architect.



ARMOUR HOUSE, LAKE SHORE DRIVE.
F. M. Whitehouse, Architect.



BOWEN HOUSE, ASTOR STREET.
F. M. Whitehouse, Architect.

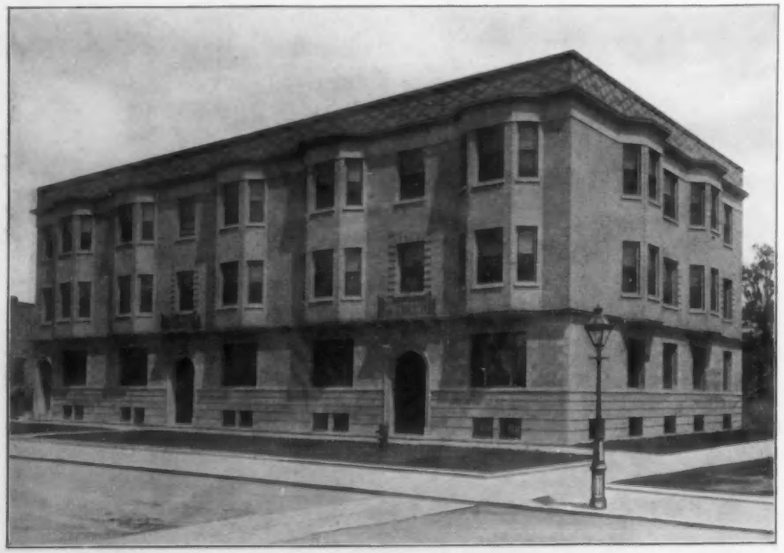
APARTMENT HOUSE, FORTY-FIRST STREET.
Henry K. Holsman, Architect.

SELFRIDGE HOUSE, LAKE SHORE DRIVE.
F. M. Whitehouse, Architect.

UNIV. OF MICH.

HOUSE, HINSDALE, ILL.
J. C. Llewellyn, Architect.

HOUSE, 5124 CORNELL AVENUE.
Henry K. Holsman, Architect.



BRAINERD APARTMENT, FORTY-FIRST STREET AND PRAIRIE AVENUE.
Henry K. Holsman, Architect.

AMARILLA APARTMEMTS, GARFIELD BOULEVARD.
Henry K. Holsman, Architect.

esque detail. A picturesque roof of red shingle tile with rolled hips covers the walls of "Norman" shaped New England red bricks. The dormer treatment of the bays on the garden front, particularly as to the roofing, is ingenious, and the general effect of the building, with its great chimney on the west end, is decidedly domestic and quite refreshing after one has been passing block after block of formal façades.

McCLURG HOUSE, LAKE SHORE DRIVE.
F. M. Whitehouse, Architect.

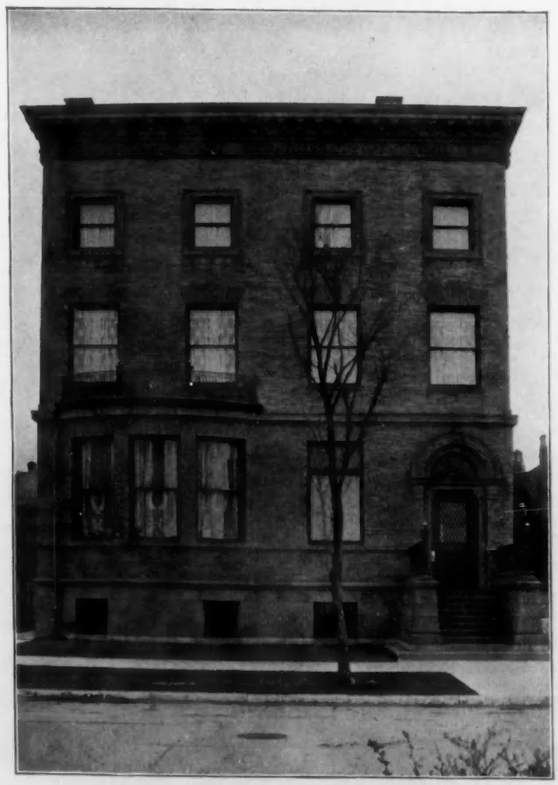
At Astor Street and Burton Place is the most noteworthy of several houses done in this city by McKim, Mead & White. Of deep brown tan mottled Roman bricks, brownstone and terra-cotta, it compares favorably with the best Eastern work inspired by the palaces of Italy, and embodying some of the traditional severity of Colonial brickwork. Now owned and occupied by Mr. John H. Wrenn, this house is best known as the "Patterson house."

On the south side, near the Chicago Beach Hotel, are several good houses, designed by Henry K. Holsman. One of these, No. 5124 Parnell Avenue, is of dull red brick in dark gray mortar with white brick piers in trimmings. The denticulated bonding of the bricks at the corner of the building and the clever disposition of the down spout at that point are to be commended; also the detail of the stringcourse below the attic sills.

The "Amarilla" apartments at Garfield Boulevard and Indiana Avenue and the apartment building at Forty-first Street and Prairie Avenue are typical of the better class of simply treated conventional Chicago apartments. The former being, however, unusual in the liberality of its plan, while the latter is rendered attractive by a pattern of delicately contrasting bricks on the parapet wall, one element being rock-faced.

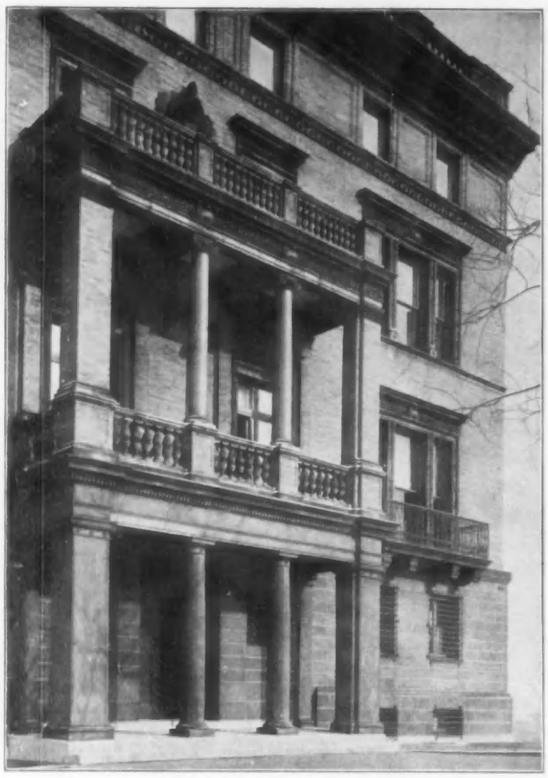
An example of the bold use of light and dark bricks as pattern and trimming is the apartment building by the same architect just around the corner at 547 Forty-first Street.

Mr. Holsman's church at Ravenswood is an interesting



HOUSE, 576 NORTH STATE STREET
Shepley, Rutan & Coolidge, Architects.

HOUSE, 610 NORTH STATE STREET.
Shepley, Rutan & Coolidge, Architects.



DETAIL, HOUSE, ASTOR STREET AND BURTON PLACE.
McKim, Mead & White, Architects.

piece of well-composed straightforward brickwork in a city where good churches are few. The interior as well as the exterior is largely of brick, another unusual thing in Chicago, although it is not easy to understand why.

Another good one is the red brick church and parsonage at the corner of Woodlawn Avenue and Sixty-second Street, of which Waid & Cranford were the architects. The little church at Fifty-seventh Street and Lexington Avenue, designed by L. E. Stanhope, is very pleasing in mass. The even-colored red pressed brick in white mortar is not particularly interesting, however, although the white woodwork gives it some "go."

In Patton & Fisher's Woodlawn Avenue house, near the University, we have a very nice bit of Italian Renaissance built of Roman bricks of a soft tan color, very prettily rusticated in the lower stories and refined as to detail. Several years ago the Quadrangle Clubhouse at the University, designed in Mr. Burnham's office, was burned. The view of the south side facing the tennis courts shows the present structure rebuilt on the original lines with an addition by Howard Shaw.

The Washington houses and the little flat building at 6109, 6111 Normal Avenue, designed by the writer, are unpretentious brick buildings in which quiet effects have been sought at a minimum of expense.

The former are built of kiln-run medium "Fallston" impervious bricks of a soft pinkish tan color, with a delicate running diaper pattern in lighter and darker bricks of harmonious shades in the parapet wall.

The latter is of kiln-run Danville red brick in light gray mortar with panel patterns in red, light gray and nearly black bricks. All sill courses are of bricks on edge in cement, and the cornice is brick with vitrified tile coping. The alley side of the building, contrary to the usual Chicago practice, is built and finished as well as the front, the same brick being used. It may be of interest to mention the fact that this is probably the only building of its class in the city having casement windows, although their superiority for hot weather ventilation is unquestionable.

NEW BOOKS.

FREE-HAND LETTERING. — A Treatise on Plain Lettering from the Practical Standpoint for Use in Engineering Schools and Colleges. By Victor T. Wilson, M. E., Author of Free-Hand Perspective. 13 full-page plates. Cloth, $1.00. New York: John Wiley & Sons.

The student who takes up the study of lettering, as outlined in these pages, will not find it to consist of a set of copies which, if reproduced carefully, will give proficiency in the subject; copy work seldom yields more than a meaningless result, it does not lead to independent and creative work. Erroneous conceptions have grown out of the idea that letters are standard, that they are rigidly fixed in their forms; the truth is there are no really fixed forms. Variety will be found to some degree in all lettering; each line of it the draughtsman makes is creative work.

HOUSE, ASTOR STREET AND BURTON PLACE.
McKim, Mead & White, Architects.

Fireproofing.

RESULTS OF THE FIRE AT ROCHESTER, N. Y.

THE fire which occurred in Rochester, N. Y., on the 26th of February has been described so fully in the public press that THE BRICKBUILDER will present only some of the more salient technical facts in regard to the effects produced upon the fireproofing materials. The only building in this fire of technically first-class construction is known as the Granite Building. It is a twelve-story structure and was designed by Mr. J. Foster Warner. It is located at the northeast corner of St. Paul

THE GRANITE BUILDING, ROCHESTER, N. Y.
(From photograph taken after the fire.)
J. Foster Warner, Architect.

and Main streets. The two street fronts are of brick and terra-cotta, and were very little damaged. The fire started in adjoining premises, communicating to this building by openings in the basement and first story, and also by a bridge connecting it with the building on the north. The firemen were able to throw water up as high as the seventh story, but from the eighth to the twelfth story apparently no water reached the building, and in this portion of the structure all the contents were entirely consumed, and even the plastering is burnt off the walls and ceilings. The building is of semi-skeleton construction, the outside walls being independent of the framing. Cast-iron columns were used and are covered with segmental two-inch thick porous terra-cotta blocks. The floors throughout are twelve-inch end construction porous terra-cotta flat arches, the bottoms being kept one inch below the beams and the skewbacks beveled to carry a beveled flange slab one inch thick. The girders are encased below the twelve-inch arches with one-inch porous tile. All partitions are of porous terra-cotta blocks, and all of the brickwork and the fireproofing was laid up in cement mortar.

The structure of the building seems to be intact so far as the steel floor beams and columns are concerned. The exterior walls on the two street fronts appear to be perfectly sound, except that in the upper story the wall has gone out about one-half an inch at the line of the partitions and interior columns. The fire was hottest in the twelfth story. Here some of the ceiling arches are cracked or broken away on the lower flanges, but the strength of the construction is not impaired. The partitions in the top story will all have to come down, though only a small proportion of the individual blocks themselves are injured. The girder casings, which are one inch thick, were almost entirely destroyed, but endured long enough to amply protect the steel frame. In the eleventh story about fifty per cent of the arch plates are broken, but most of the partitions are standing in good order. The eighth, ninth and tenth stories show the fireproofing intact, except in a few places where the fire was unusually hot. Below the eighth story very little of the fireproofing is damaged at all, and below the fourth story a considerable portion of the finish was not touched. In the first story the stock was entirely destroyed, but the building is not damaged.

REAR OF THE GRANITE BUILDING.
Showing the manner in which the structure withstood the attack of a fierce fire.

Running along the north side of the Granite Building is a thirty-foot alley. Across the alley was the seventy-

foot front seven-story wholesale department of Sibley, Lindsay & Curr. This building was connected by bridges to the Granite Building. The floors were of six-inch segmental arch, with no protection on the beams. The columns were round cast iron, without any protection. These columns failed, and the entire interior collapsed, except one bay in front. In the rear of this building was a storehouse and stable of the same construction for five stories with two stories recently added of Roebling flat arch wide span construction about eleven feet between girders. Some of the columns failed and the whole building collapsed, except one span on the front, which now shows five tiers of six-inch segmental arches and two floors and roof intact.

Mayor James B. Cutler, who is one of the leading architects of Rochester, is quoted as saying that the damage to the Granite Building can be repaired at an expense not exceeding twenty-five per cent of its original cost. Had there been no openings between the Granite Building and the adjoining structure, the flames would probably never have reached the former. From its construction, being practically undivided, the Granite Building was a huge chimney that drew to it flames from the adjoining buildings. The walls of the structure are perfectly safe, and will probably need no repairs.

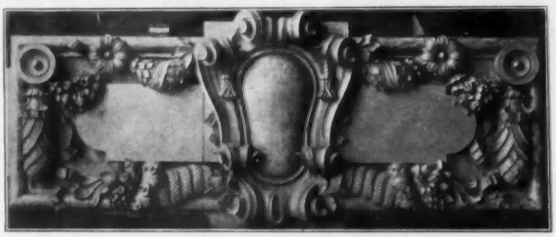
It undoubtedly saved the city from a very general conflagration, though in this respect it was helped by the climatic conditions, as most of the roofs of adjoining buildings were covered with snow, and there was no high wind at the time. It is interesting as a remarkable illustration of the non-conducting qualities of hollow terra-cotta arches that the bank of snow on the roof of the Granite Building remained in place to a considerable extent after the fire had entirely burned out the interior.

Terra-cotta has again demonstrated its fire-resisting qualities, and has shown that it is perfectly able, even under very adverse conditions, to fully protect the steel frame and be thereby the means of very materially reducing the fire loss. If there are defects in the material itself, they surely have not shown themselves in any of the recent fires, and the defects in manner of application or in constructive detail are sufficiently obvious in each conflagration to serve as helps towards the developing of more perfect methods. This fire has also emphasized the weakness of the ordinarily constructed terra-cotta partition. It has, at the same time, shown that even without the concealed steel framework in the partition blocks, which in our judgment is essential to stability against the attack of fire, a block partition, when laid up with cement mortar, will stand an extraordinary amount of fire. When the columns and beams collapsed in the Sibley Building they struck against a four-inch partition, separating it from another structure, tearing holes therein and seriously threatening the stability of the structure; but notwithstanding the intense fire on one side, this four-inch partition of terra-cotta proved to be an almost effectual stop against the spread of the flames, and from behind it the firemen were able to completely check the progress of the conflagration.

Selected Miscellany and Editorial Comment

CAST-IRON COLUMNS IN BUILDINGS.

CAST-IRON columns were used in buildings before steel beams were even thought of. Experience has shown that a cast-iron column is less liable to rust than steel, and at times such columns can be more readily obtained in the open market. Furthermore, cast-iron



DETAIL BY ISRAELS & HARDER, ARCHITECTS.
New Jersey Terra-Cotta Co., Makers.

columns can be erected without requiring special riveting or steel connections. The steel column of built-up sections is an advent of the last twenty years or more, and is far superior to the cast iron in a structural sense, being of more reliable composition, admitting of greater

HOUSE, WASHINGTON, D. C.
Marsh & Peters, Architects.
Light gray brick furnished by Kreischer Brick Manufacturing Co.

variety of shapes, fitting more closely into the construction itself and proving more adaptable to all conditions of loading and bracing, so that there is no excuse for any

DETAIL BY H. LUCAS, ARCHITECT.
New York Architectural Terra-Cotta Co., Makers.

continued use of cast iron, notwithstanding the few excellent qualities enumerated as being possessed by the cast material. The use of cast iron ought to be prohibited by law in any structure where there is the slightest possibility of tortional or bending strain coming upon a column or where the integrity of the frame as a whole is relied upon for the stability of the building. The failure of the Hotel Darlington in New York was due to such manifest natural causes that they hardly admit of discussion. For purposes of economy and rapidity of erection the skeleton frame of this building was constructed with cast columns, which were poorly connected at the joints, and run up in great haste. The fireproofing was cheapened to the last degree, and a great load of material was piled on the framework in the upper story. The frame, in the absence of the brick filling, had no more rigidity than one would naturally expect who was at all familiar with cast column construction; and the overloading in the upper story, which would not have been serious had the frame been well knit together, was sufficient to start a portion of the structure, and the whole inevitably and naturally fell in a tangled heap to the cellar. The lesson is a severe one, but it is to be hoped that the Hotel Darlington is the last example we shall see of an attempt to use cast-iron columns in place of steel for a skeleton frame. They are really about as archaic as would be a Hodgkinson cast girder if used to-day in a steel frame building.

DETAIL BY EAMES & YOUNG, ARCHITECTS.
Winkle Terra-Cotta Co., Makers.

DETAIL BY HILL & KENDALL, ARCHITECTS.
Excelsior Terra-Cotta Co., Makers.

DETAIL BY CYRUS L. W. EIDLITZ, ARCHITECT.
Perth Amboy Terra-Cotta Co., Makers.

TESTS OF BUILDING MATERIAL.

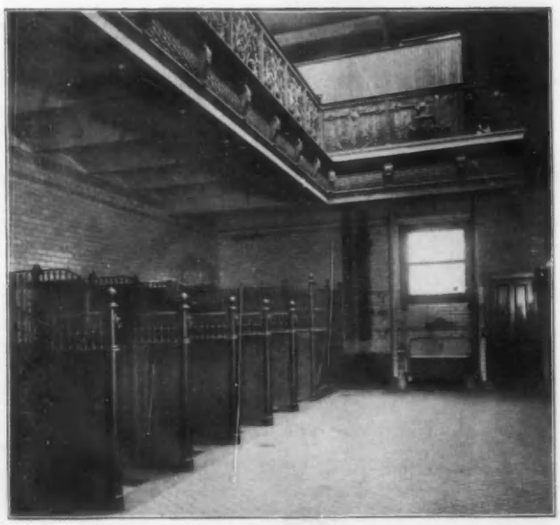
EVERY new device which is put upon the market, if it is intended to supply a want in the building industries, is usually subjected to tests designed to show what the material or construction will stand. Without taking into account the tests which are made by interested parties, the usual tests which are made by architects and builders are intended to be perfectly fair and to develop the ultimate possibilities of the material or construction under consideration. As a matter of fact, however, few such tests of building materials are conclusive. Actual conditions such as exist in a finished building can rarely be reproduced on a scale that will admit of a ready test in a factory or a yard. This is especially true of fireproofing materials. A conflagration such as that which took place at Baltimore shows most conclusively that laboratory tests are not altogether to be depended upon. A great fire has a way of searching out weak joints, of uncovering the defence-

DETAIL BY FRED WESLEY WENTWORTH, ARCHITECT.
Brick Terra-Cotta & Tile Co., Makers.

less positions and of showing in unexpected ways how a material which might have stood the most rigid tests to the satisfaction of architects, builders and inspectors

HOUSE, CHICAGO, ILL.
Nimmons & Fellows, Architects.
Brick furnished by Ohio Mining and Manufacturing Co.

would at the crucial moment be found wanting. As a matter of fact we can only infer what might be the exact conditions in a great fire; and after all, when our manufacturers talk of temperatures running over two thousand degrees, there is a great deal of conjecture mixed with their statements. It would not follow from this that tests of building materials are of no value. On the contrary,



STABLE FOR ELBRIDGE T. GERRY, ESQ., NEW YORK CITY.
McKim, Mead & White, Architects.
Lined with Tiffany Dark Granite English size Enamel Brick.

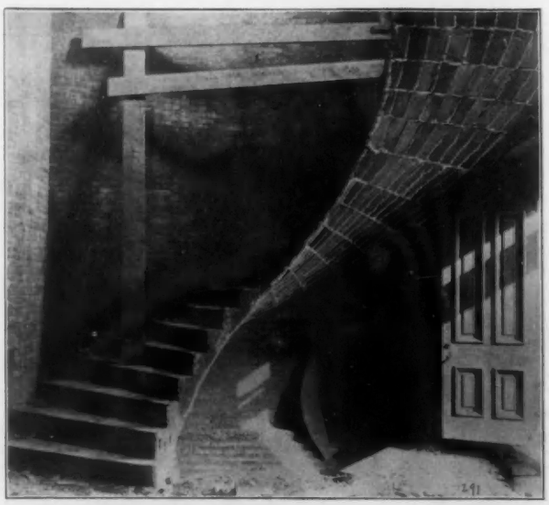
they have a great deal of value, and they cannot be too strongly insisted upon; but they do not always reproduce conditions which may afterwards obtain in actual practice with the material or construction under observation. It has become almost a trite saying that no fireproofing material will stand fire unless it is itself a product of fire. In the light of recent fire experiences we should say that the only fair way to test any building material for its fire-resisting qualities is to actually test it to destruction, just as we do with beams and columns, and if it is to be a fire test raise the temperature until the material melts to pieces if necessary; if a load test, not be satisfied with mere cracks and deflections, but finally break down the construction.

THE ARCHITECTURAL LEAGUE.

THIS year's exhibition of the Architectural League of New York was marked by a care in the selection which resulted in reducing the number of accepted compositions to an unusually small number, but which at the same time produced a very choice and interesting collection. The Vanderbilt Gallery was moderately well filled with architectural drawings. The exceedingly clever studies for the new City Hall build-

DORMITORIES, YALE UNIVERSITY.
Cady, Berg & See, Architects.
Ludowici Tile and Folsom Snow Guards used on roofs.

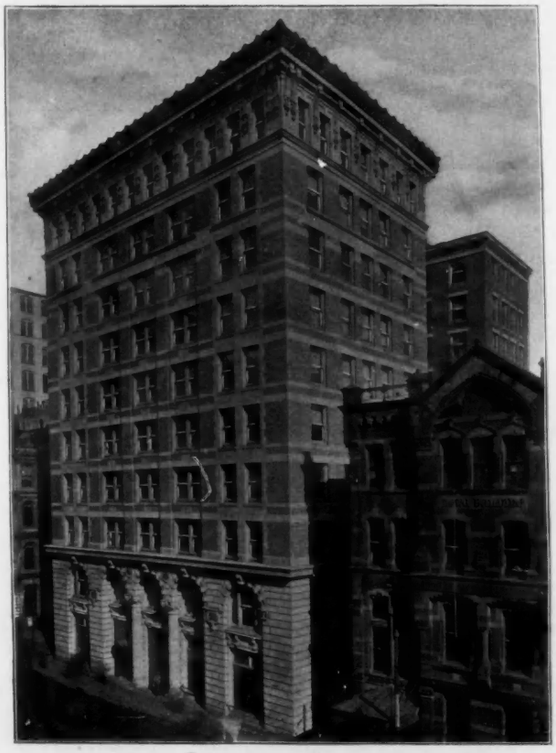
ings in New York were among some of the most interesting contributions, the designs themselves being admirably presented; and if such an aggregation of buildings must be, Mr. Hornbostel has certainly handled his problem very effectively. There are also some charming interior studies for the Government building at Cleveland by Mr. Brunner, rendered in a most striking manner in pencil, about as good architectural drawings as we



STAIRCASE, GUASTAVINO CONSTRUCTION, FIRST CHURCH OF CHRIST, SCIENTIST, NEW YORK CITY.
Carrère & Hastings, Architects.

remember ever to have seen. In one corner of the room was hung the original drawing for the front of the Ponce de Leon Hotel, at St. Augustine, made by Mr. Masqueray for Carrère & Hastings way back in the eighties, a drawing which deserves to be preserved as in one way illustrating what proved to be the beginning of our modern artistic development of architectural terra-cotta.

The bulk of the space in the League rooms was occupied with the exhibition of industrial and decorative art. A notable feature was the display of the enameled terra-cottas, tile and faience work for the New York Subway Station, by the Grueby Faience Company, the Rookwood Pottery Company, and the American Encaustic Tiling Company. None of these stations are as yet open to the public, but to judge from the examples at the League



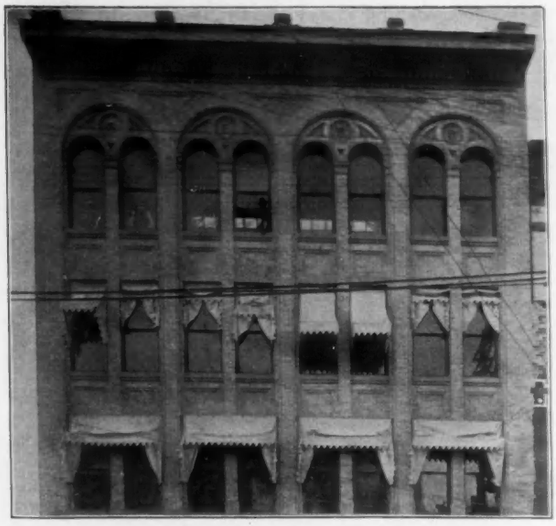
STTE MUTUAL BUILDING, CONGRESS STREET, BOSTON.
Andrews, Jaques & Rantoul, Architects.
Built of brick made by Sayre & Fisher Co.

some very excellent work has been done by the architects in charge, and we may look for an illustration in New York of what we might have had in Boston had our Subway Commission been willing to consider art as well as utility.

OF INTEREST.

Joseph Evans Sperry (of Baltimore) and York & Sawyer (of New York) announce that they have formed a copartnership for the practice of architecture in Baltimore.

John Galen Howard and D. Everett Waid, architects, have dissolved partnership. Mr. Howard is professor of



UPPER STORIES OF DORRANCE BUILDING, HOUSTON, TEXAS.
Green & Svarz, Architects.
Gray brick furnished by Hydraulic Press Brick Co., St. Louis.

architecture in the University of California, and will make Berkeley, Cal., his home. Mr. Waid will continue the New York practice and retain the offices at 156 Fifth Avenue.

Edward T. Wilder and Thomas Wight announce that they have formed a partnership for the practice of architecture under the firm name of Wilder & Wight. Offices, 316 Dwight Building, Kansas City, Mo.

HERMAN BUILDING, MILWAUKEE, WIS.
Jenney & Mundie, Architects.
Terra-Cotta furnished by Northwestern Terra-Cotta Co.

Linn Kinne and Harold B. Brady have formed a partnership for the practice of architecture, under the firm name of Kinne & Brady. Offices, Grange Building, Herkimer, N. Y.

Messrs. Delano & Aldrich, architects, 9 East Forty-first Street, New York, would be glad to receive manufacturers' samples.

Temple, Burrows & McLane, architects, McManus Building, Davenport, Ia., desire manufacturers' catalogues and samples.

Myron Hunt, architect, announces the removal of his offices from 123 La Salle Street, Chicago, to 126 West Third Street, Los Angeles, Cal.

DETAIL BY PEABODY & STEARNS, ARCHITECTS.
Atlantic Terra-Cotta Co., Makers.

Louis C. Spiering, having completed his work with the Louisiana Purchase Exposition, has opened an office for the practice of architecture in the Chemical Building, St. Louis.

Henry A. Koelble, architect, has taken a new suite of offices at 103 East 125th Street, New York City.

R. L. Lessel, architect has opened an office in the Roy Building, Halifax, N. S., and desires manufacturers' catalogues and samples.

The San Francisco Architectural Club desires to receive, for purposes of reference, manufacturers' catalogues and samples.

The members of the Chicago Architectural Club dedicated their new clubrooms in the Dexter Building, 84 Adams Street, on the afternoon of March 12.

The Boston Architectural Club will hold an exhibition at the gallery of the Boston Art Club, Dartmouth Street, Boston, from May 2 to May 14, 1904, inclusive. Special Exhibition Committee: Edward Percy Dana, chairman; Hubert G. Ripley, Louis C. Newhall. Jury and Hanging Committee: Robert S. Peabody, R. D. Andrews, A. W. Longfellow, H. B. Pennell, Timothy F. Walsh, H. C. Dunham, George H. Hallowell, Boston; Julius F. Harder, New York; Edgar V. Seeler, Philadelphia.

The annual dinner of the Atelier Donn Barber, in honor of the patron, was given at the Café Liberty, New York City, on February 19. During the evening Mr. Barber spoke very encouragingly of the work done in the New York Ateliers, under the guidance of the Society of Beaux-Art Architects. Among the guests were Mr. A. J. Sauer, treasurer of the Philadelphia T Square Club, and Mr. Birch Burdette Long, holder of the Chicago Architectural Club's Scholarship, who spoke upon similar work in their respective cities.

The Fourth Exhibition of the Brooklyn Chapter of the American Institute of Architects will be held at the Pouch Gallery, 345 Clinton Avenue, Brooklyn, from Tuesday, May 3, to Saturday, May 21 inclusive.

The Fourth Annual Exhibition of the Washington Architectural Club will be held in the Corcoran Gallery of Art, beginning March 28.

DETAIL BY G. W. & W. D. HEWITT, ARCHITECTS.
Conkling-Armstrong Terra-Cotta Co., Makers.

The next Competition for the Rotch Traveling Scholarship will be held in Boston, April 18, 19 and 23. Detailed information concerning the scholarship may be obtained by applying to Clarence H. Blackall, Secretary of the Committee, 1 Somerset Street, Boston.

WANTS.

AN ARCHITECTURAL TERRA-COTTA DRAUGHTSMAN of ten years' practical work in terra-cotta, and five years' in architecture would like a position. Best of references. Address A. E. H., Box No. 104, Clayton, Mass.

GRADUATE CIVIL ENGINEER, age thirty, some architectural training, experienced in structural design and construction, desires position with firm of architects or construction company handling large work. Address C. E., Room 52, 85 Water Street, Boston, Mass.

WANTED — A COMPETENT ARCHITECTURAL DRAUGHTSWOMAN, one who is familiar with all branches of office work. State salary wanted. Address DRAUGHTSWOMAN, care THE BRICKBUILDER.

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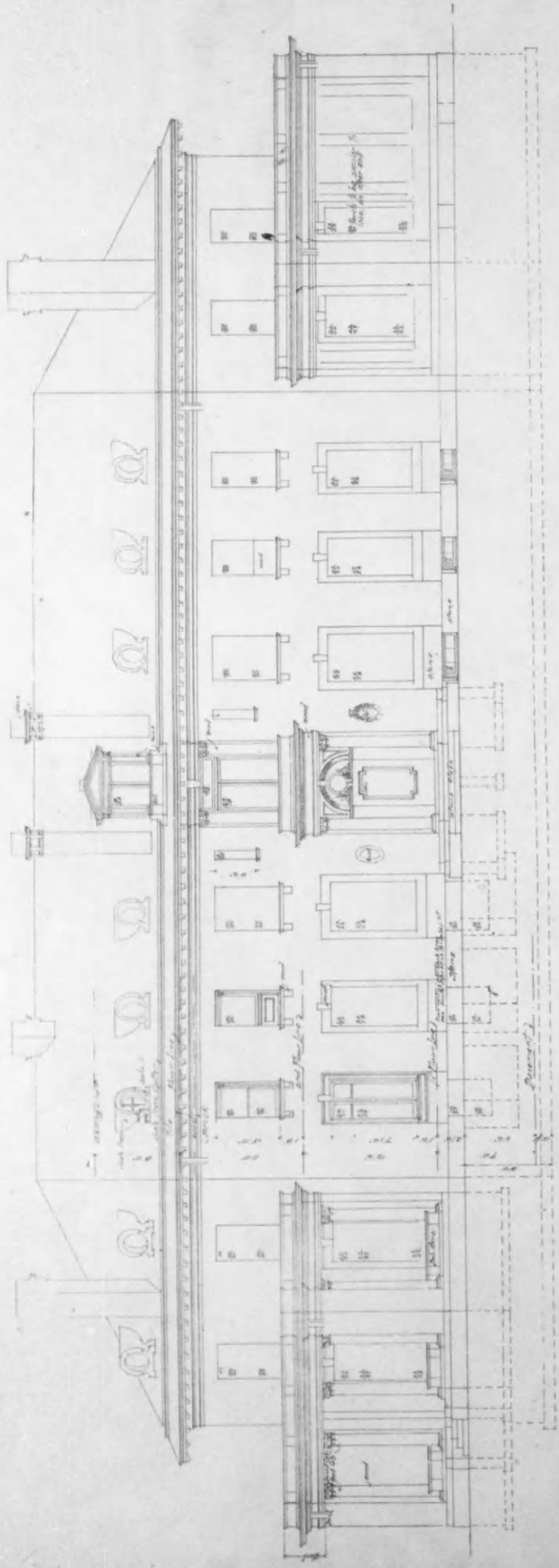
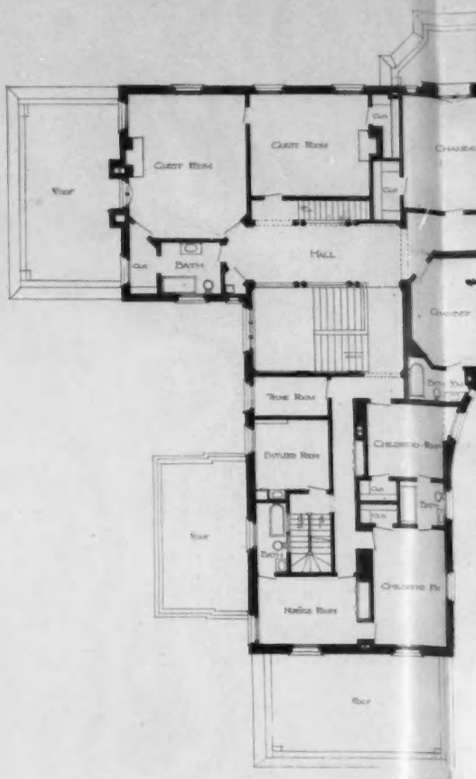
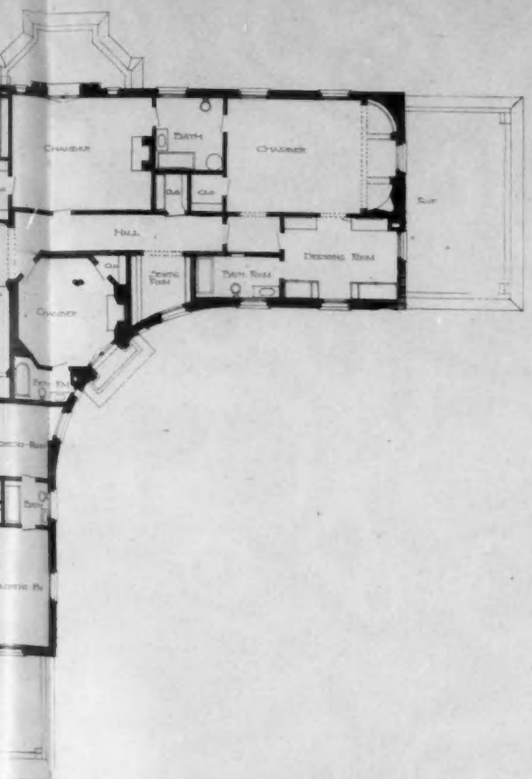
at Armour Institute of Technology CHICAGO, ILL.



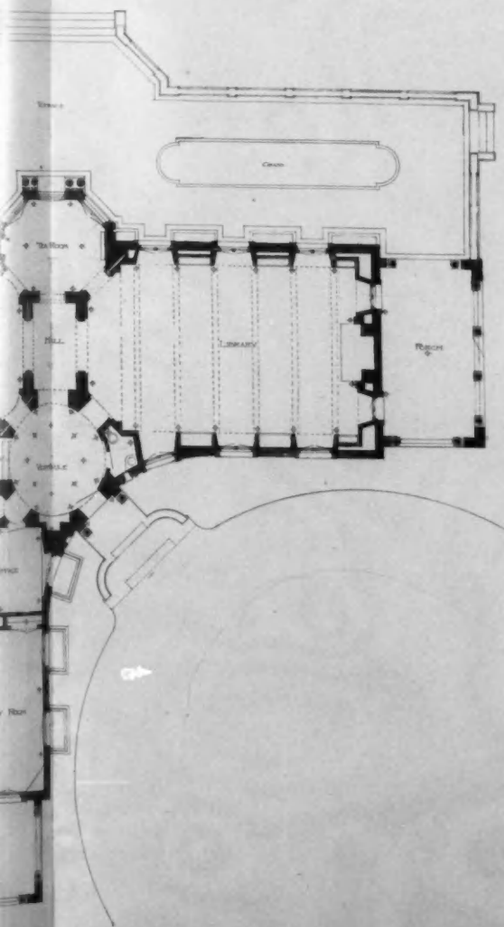
SOUTHWEST ELEVATION.


Guest Room
Guest Room
Hall
Bath
Roof
Roof
Roof

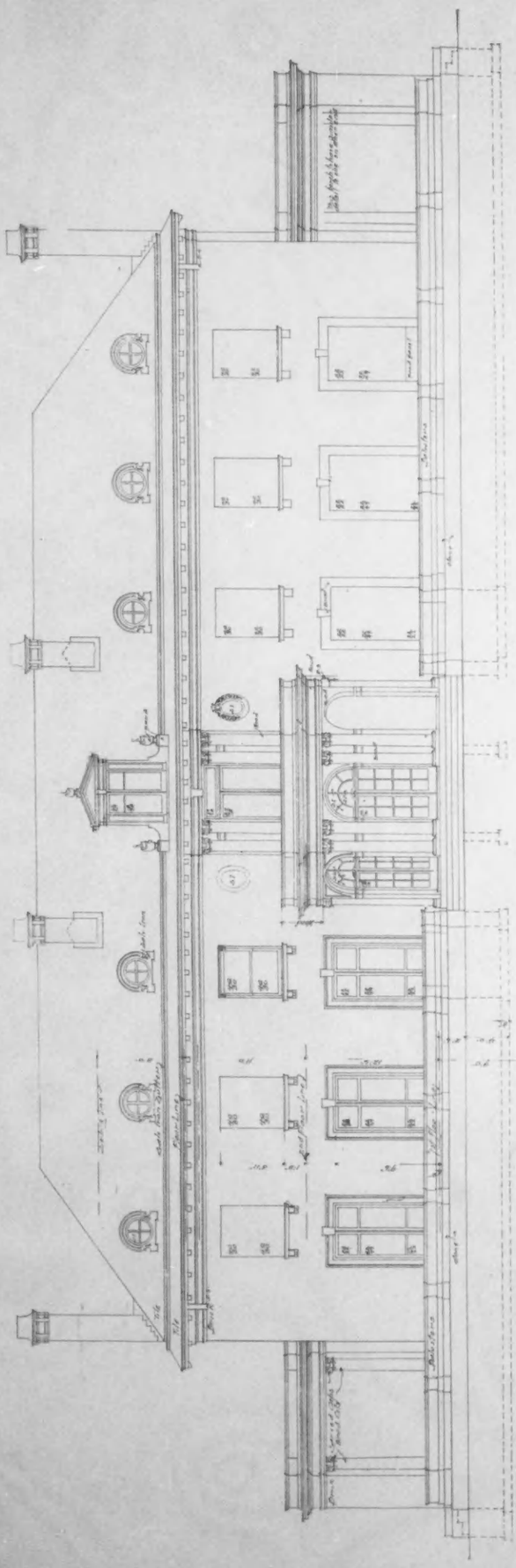
PLATES 17 and 18.



SECOND FLOOR PLAN.



FIRST FLOOR PLAN.

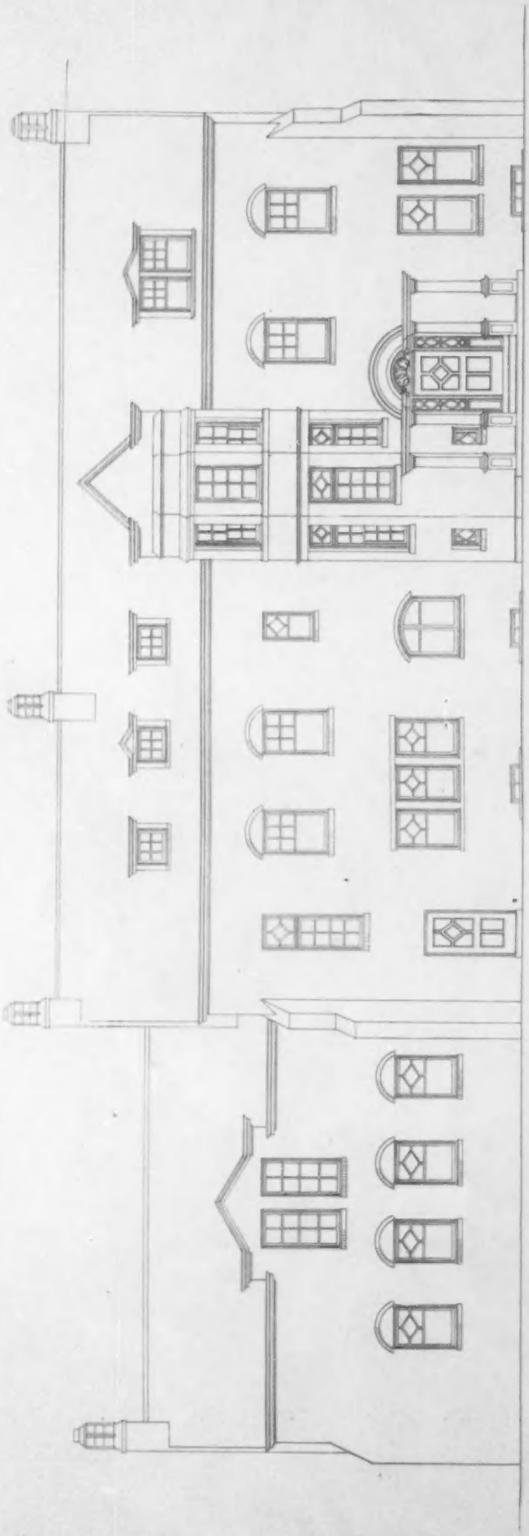


EAST ELEVATION.

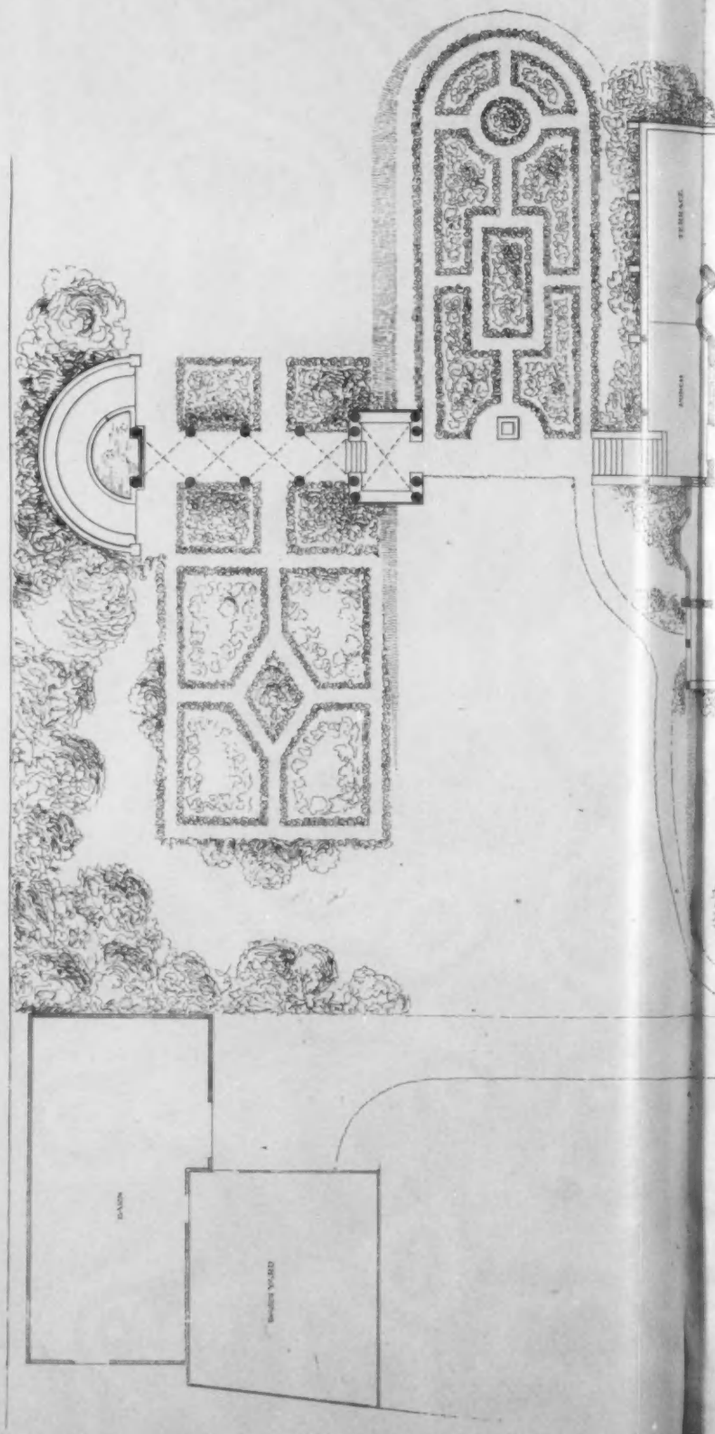
HOUSE AT LAKE FOREST, ILL.

JAMES GAMBLE ROGERS, ARCHITECT.

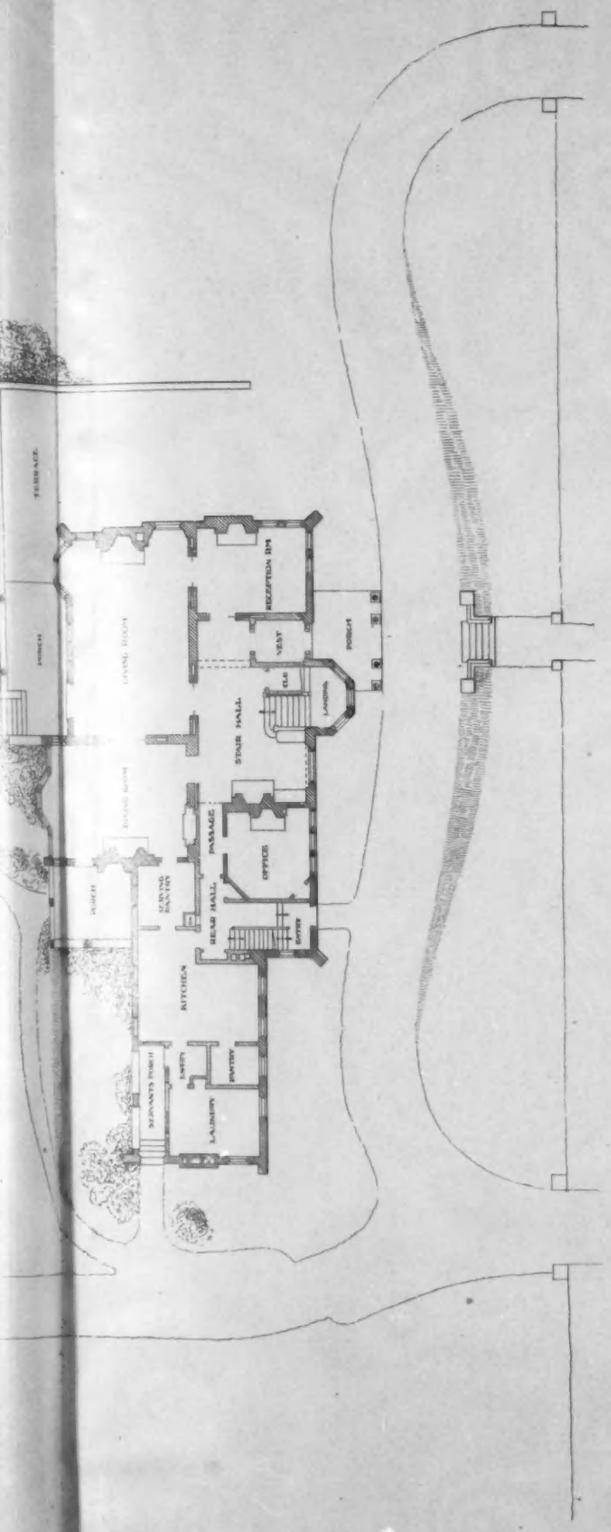
UNIV. OF MICH.



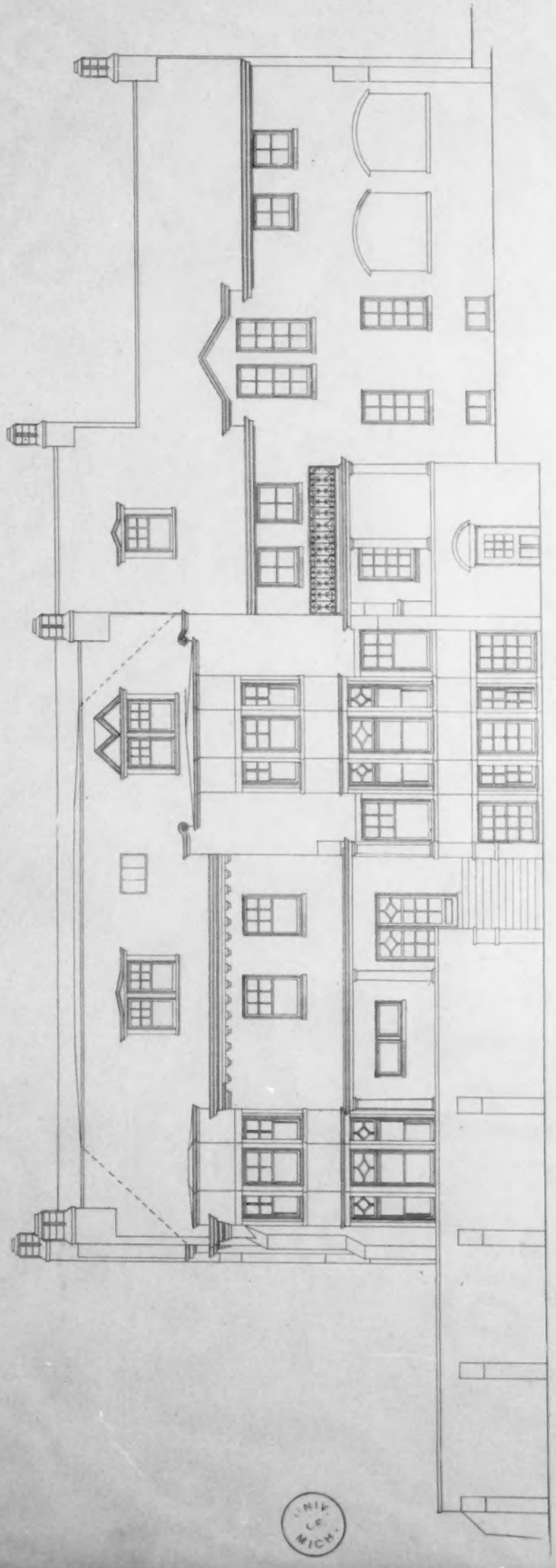
NORTH ELEVATION.



PLATES 19 and 20.



GROUND PLAN.

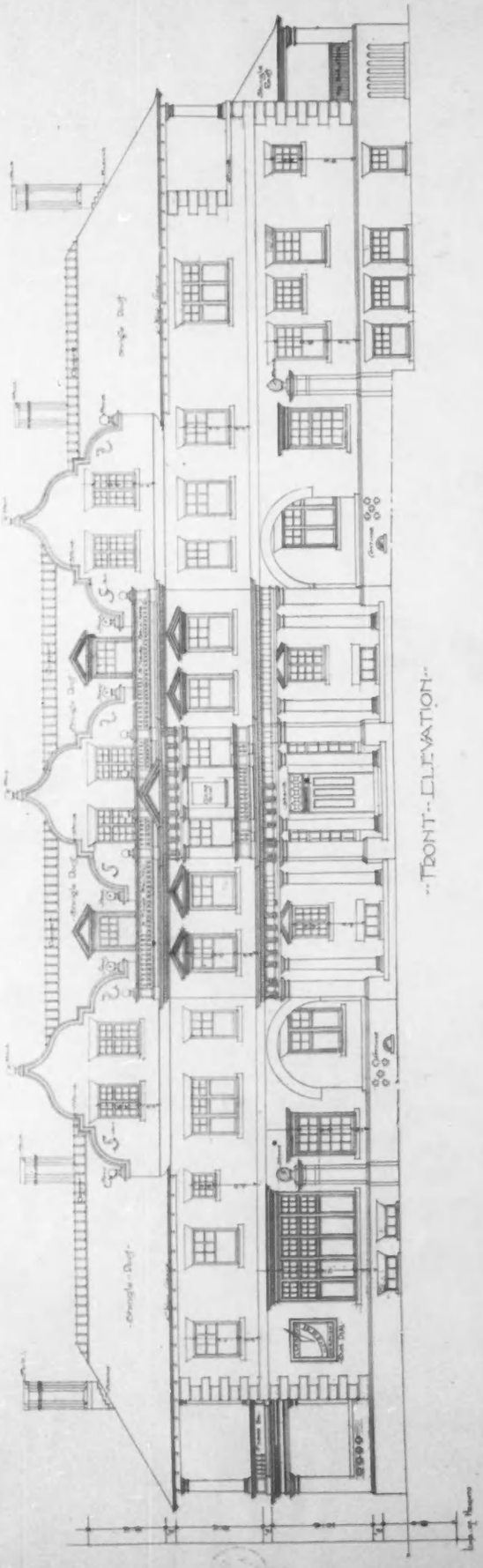


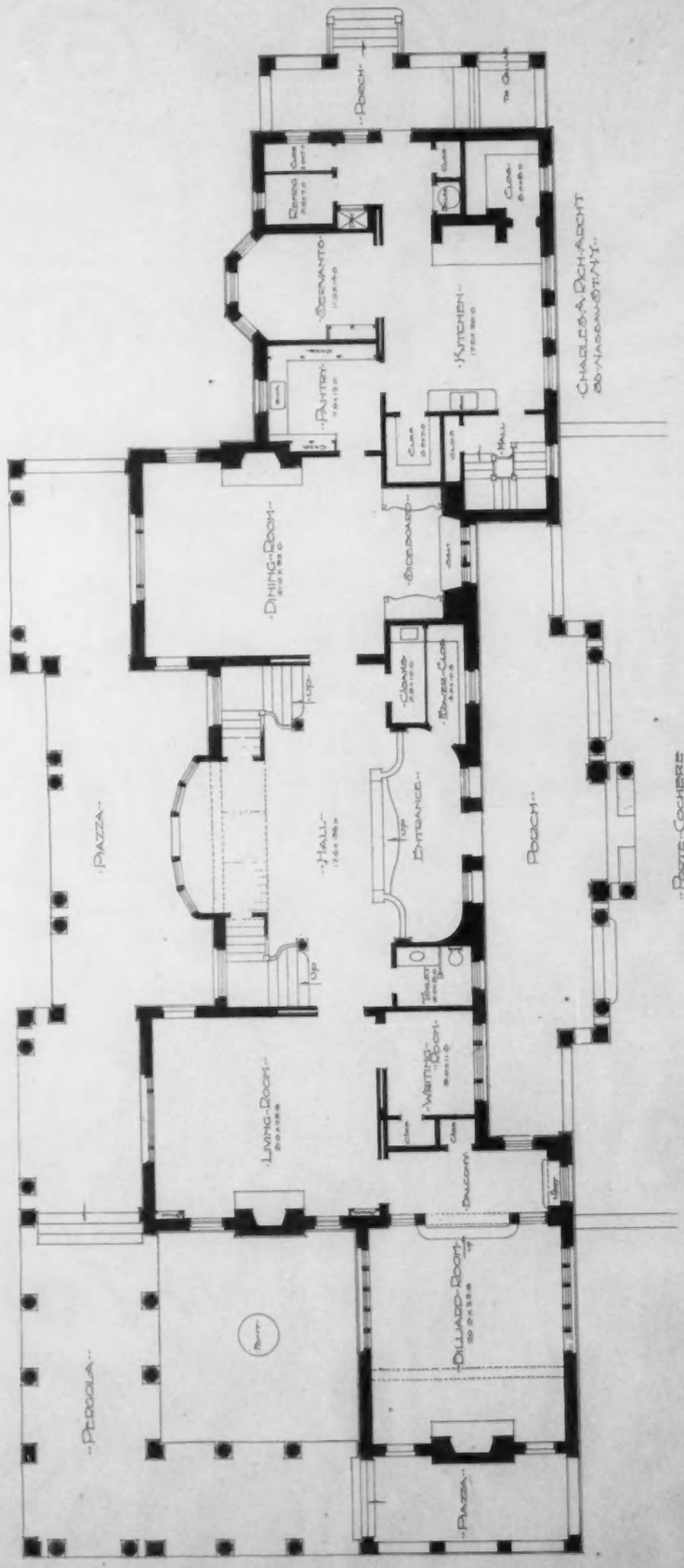
SOUTH ELEVATION.

HOUSE AT LA SALLE, ILL.

POND & POND, ARCHITECTS.

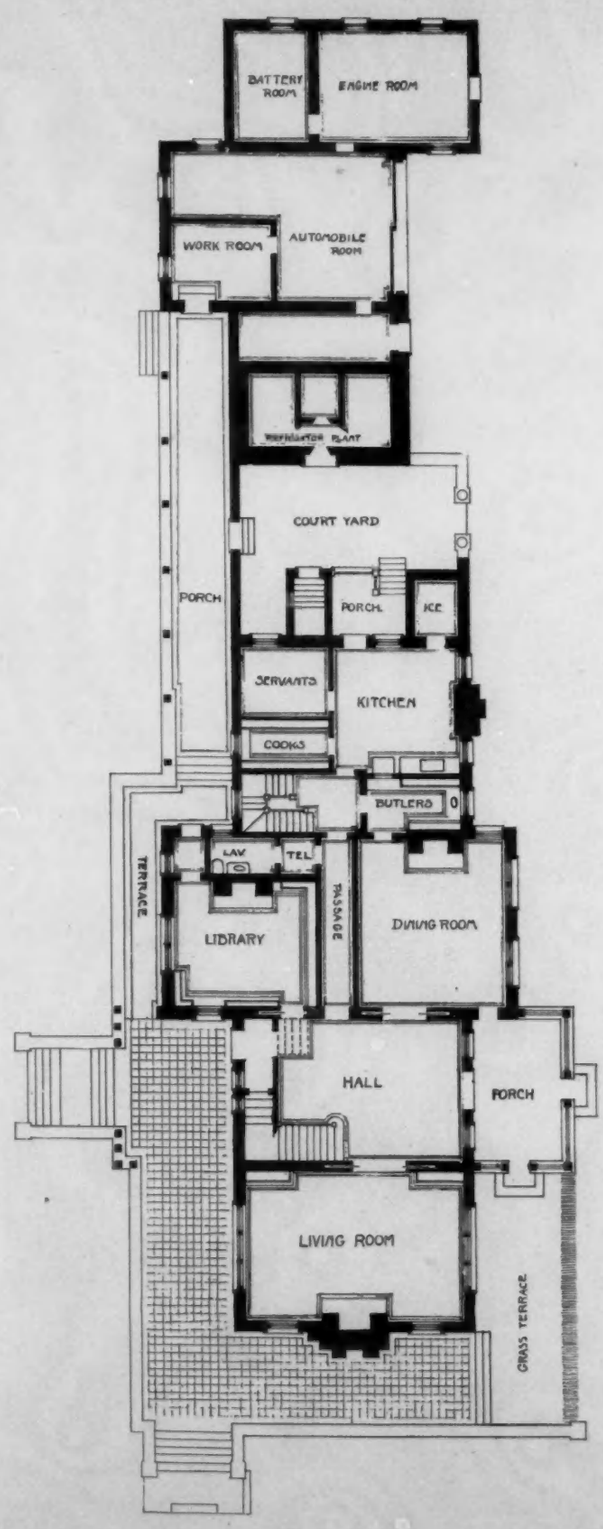
UNIV. OF MICH.



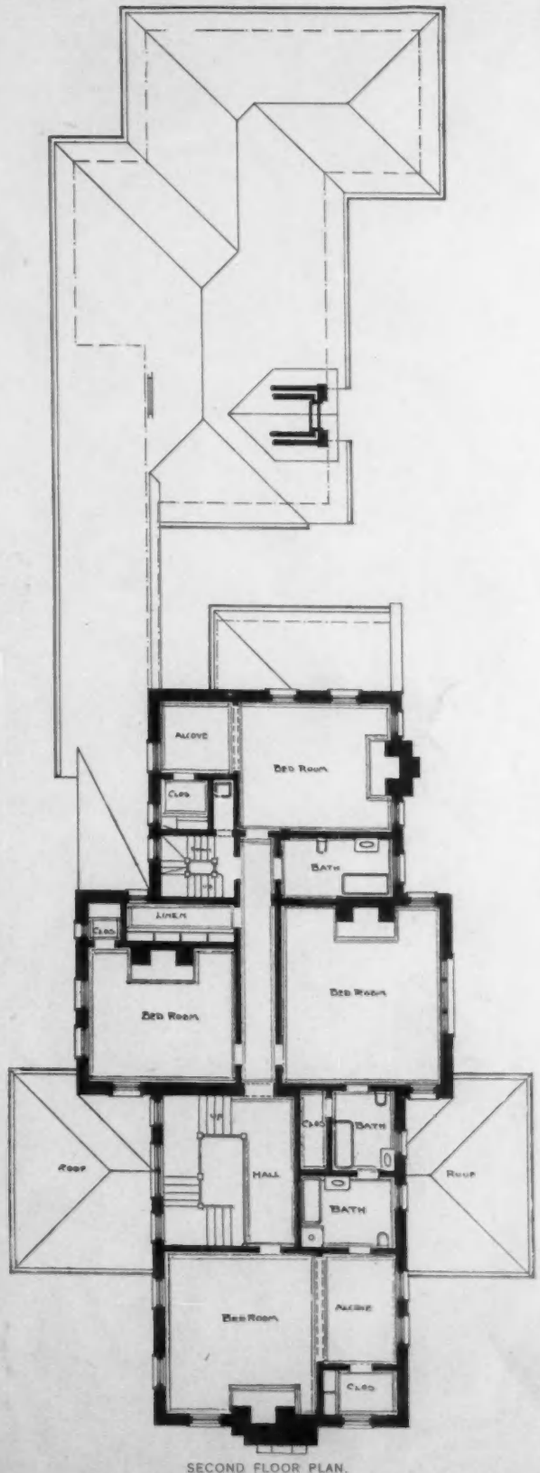


HOUSE AT PEACOCK POINT, LONG ISLAND, N. Y.

CHARLES A. RICH, ARCHITECT.



FIRST FLOOR PLAN.

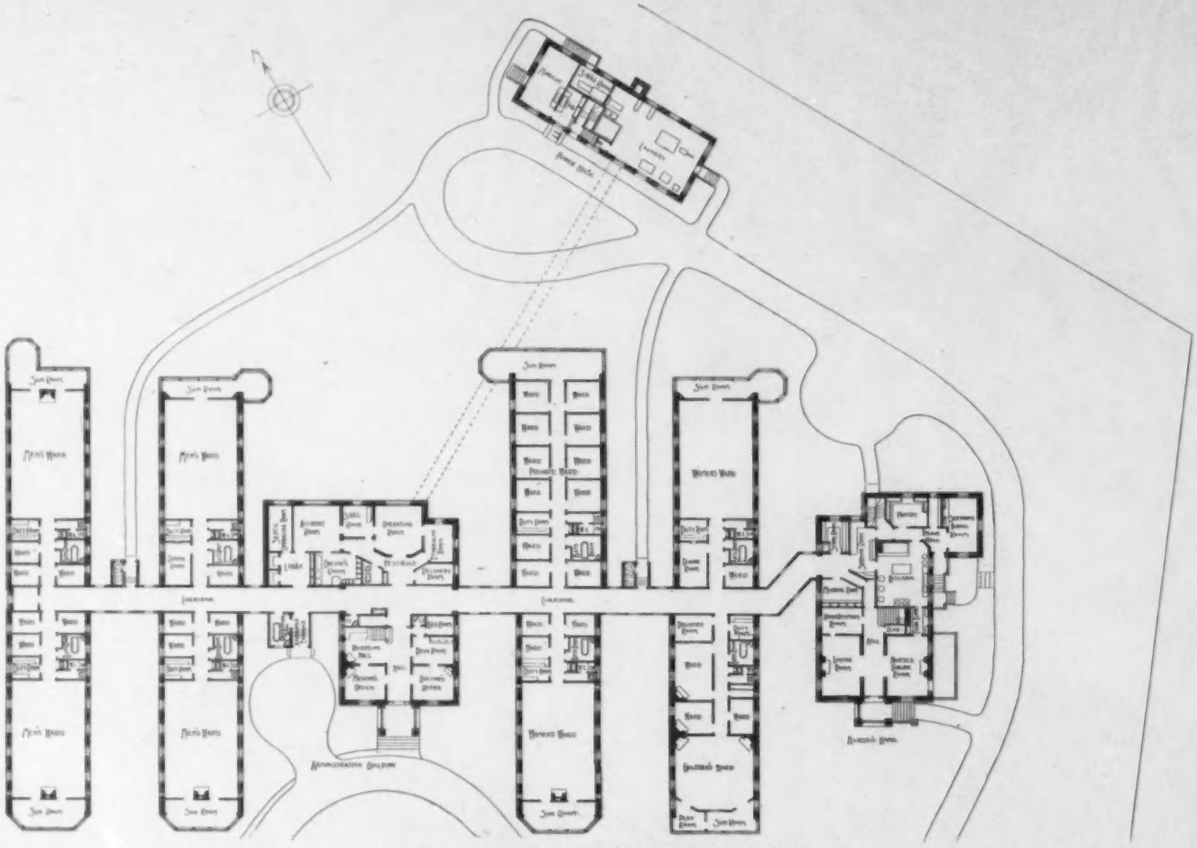


SECOND FLOOR PLAN.

HOUSE FOR H. S. PICKANDS, ESQ., CLEVELAND, OHIO.

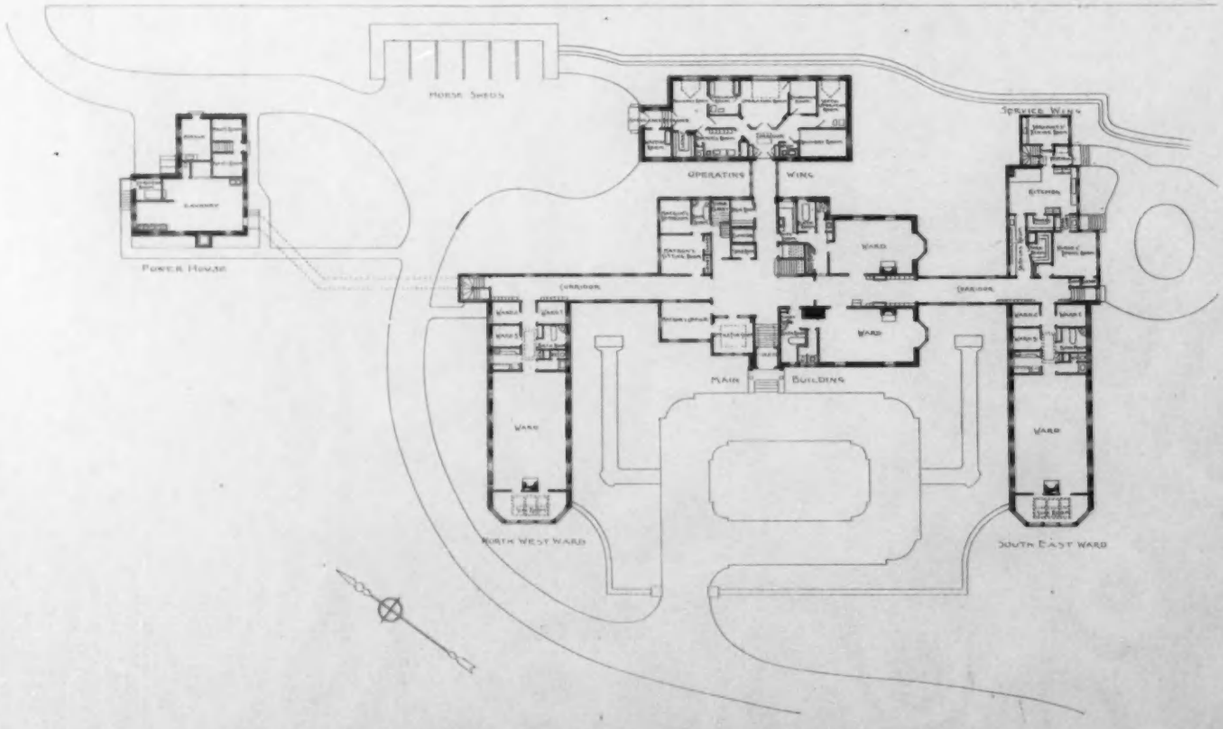
MEADE & GARFIELD, ARCHITECTS.

UNIV. OF MICH.



HOSPITAL AT YOUNGSTOWN, OHIO.

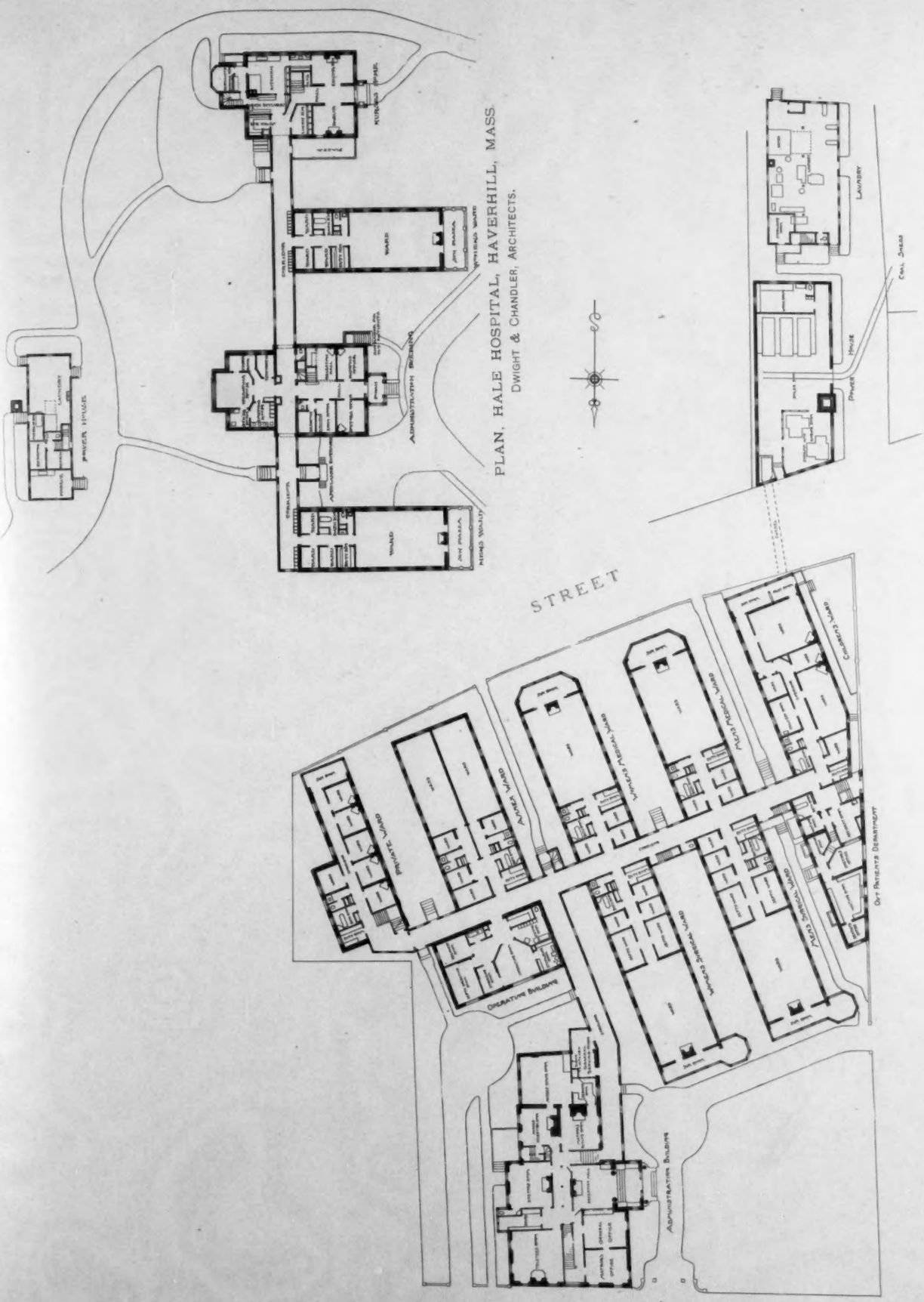
DWIGHT & CHANDLER, ARCHITECTS.



Central building is an altered residence, and is used in second story for private wards, and in third story for nurses' rooms.

PLAN, LAWRENCE GENERAL HOSPITAL, LAWRENCE, MASS.

DWIGHT & CHANDLER, ARCHITECTS.



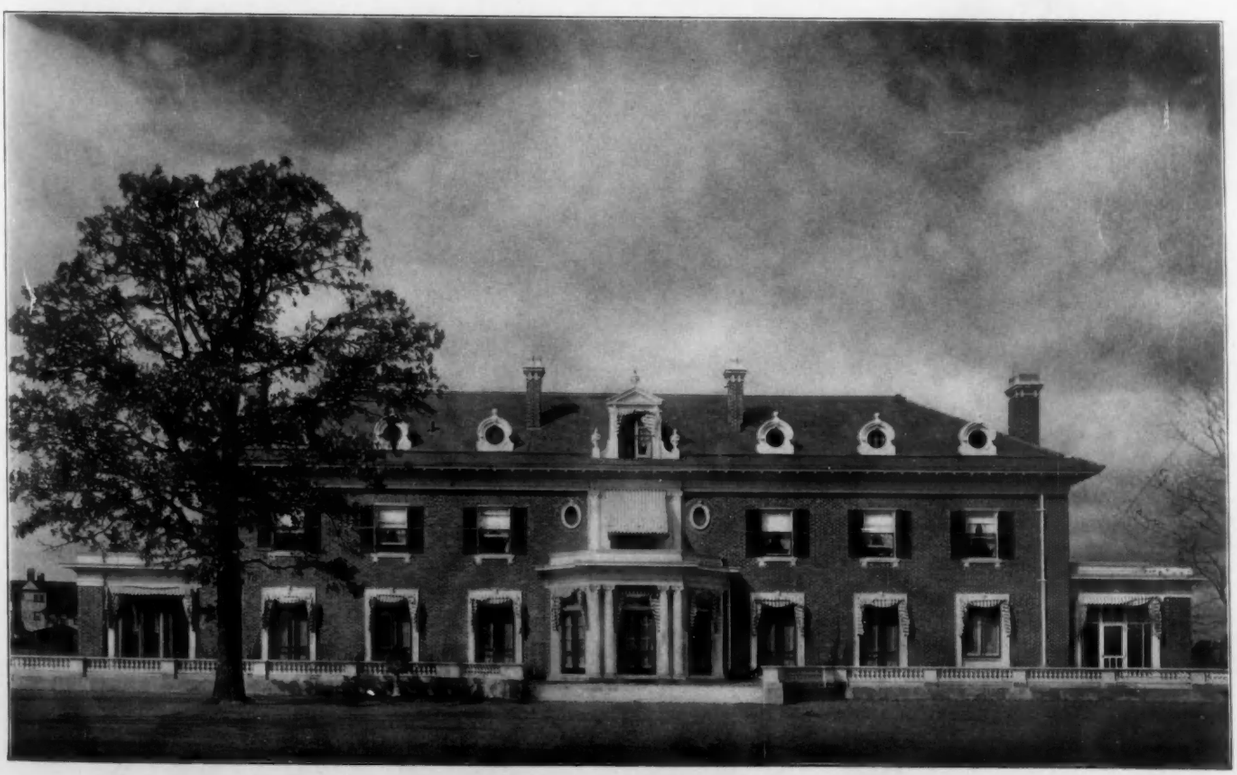
PLAN, HALE HOSPITAL, HAVERHILL, MASS.

DWIGHT & CHANDLER, ARCHITECTS.

The Administration Building was formerly used for patients as well, but is remodelled for administration purposes in first story, and for doctors, nurses and servants' quarters in second and third stories.

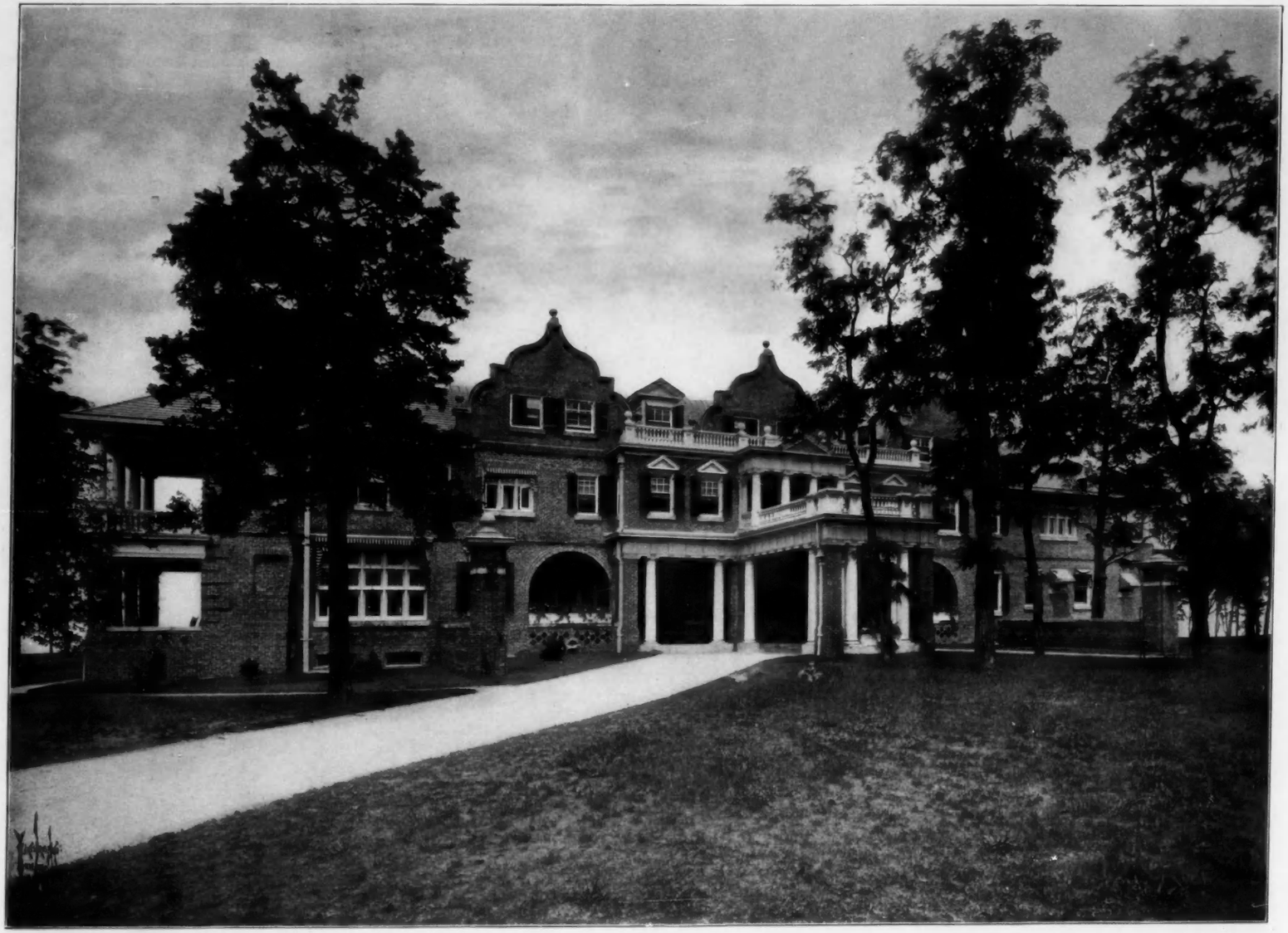
PLAN, SALEM HOSPITAL, SALEM, MASS.

DWIGHT & CHANDLER, ARCHITECTS.



HOUSE AT LAKE FOREST, ILL.

JAMES GAMBLE ROGERS, ARCHITECT.



HOUSE AT PEACOCK POINT, LONG ISLAND N. Y.

CHARLES A. RICH, ARCHITECT.

THE BRICKBUILDER,
MARCH,
1904.

246

HOUSE AT PEACOCK POINT, LONG ISLAND, N. Y.

CHARLES A. RICH, ARCHITECT.

HOUSE FOR H. C. WICK, ESQ., CLEVELAND, OHIO.
MEADE & GARFIELD, ARCHITECTS.

HOUSE FOR H. S. PICKANDS, ESQ., CLEVELAND, OHIO.
MEADE & GARFIELD, ARCHITECTS.

UNIV. OF MICH.

STABLE, HOUSE AT LAKE FOREST, ILL.

JAMES GAMBLE ROGERS, ARCHITECT.

ENTRANCE GATES, HOUSE AT LAKE FOREST ILL.

JAMES GAMBLE ROGERS, ARCHITECT.

UNIV. OF MICH.

HOUSE AT LA SALLE, ILL.

POND & POND, ARCHITECTS.

UNIV. OF MICH.